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CHILE AND ARGENTINA:

*ASYMMETRICAL AIR FORCE
MODERNIZATION AND THE
BUILDING OF CONFIDENCE*

by

Kevin Michael O'Reilly

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Biographical Note

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Executive Summary

During this century, relations among the countries of South America's Southern Cone have never been better than they are today. Brazil and Argentina have set the pace after generations of mutual suspicion. Resolution of political disputes in the late 1970s and early 1980s has allowed for groundbreaking security arrangements and a broad program of economic integration. They are now senior partners in the Common Market of the South (Mercosur), the most ambitious regional integration effort in South American history.

Chile and Argentina – traditional rivals on the brink of war twenty years ago – are also cooperating to a degree unimaginable in the past. If their relationship is not so close as the Brazilian-Argentine relationship it is in part because they have had a longer road to travel. Still, the two governments have resolved most of the fundamental issues dividing their countries. They have settled all but one of twenty-two territorial disputes that existed as late as 1991 and regularly conduct high-level political and economic consultations. The association agreement Chile signed with Mercosur in 1996 should accelerate trends towards integration and cooperation.

Brazilian-Argentine integration, military exchanges, and more than a decade of increasingly transparent confidence-building measures (CBMs) have promoted a sense of shared interests. Neither government regards the other as a military threat. Chile and Argentina have not yet established a similar sense of confidence across their border. Chile's armed forces, in particular, have reacted coolly to the idea of CBMs, concerned that they might be a back door to arms control. They do not want to abandon traditional definitions of national security that they believe have served Chile well since the War of the Pacific over a century ago.¹

¹ "Confidence Building in the Southern Cone," *The Stimson Center*,
<<http://www.clark.net/pub/stimson/cbm/la/lawkshop.htm>>, (March 26, 1997).

This paper looks at current Chilean and Argentine defense planning, particularly recent air force modernization efforts. It focuses on recent upgrades and purchases of attack and fighter aircraft and plans for future acquisitions of such aircraft. Air power is just one aspect of military power. Looking at the respective navies or armies would also offer insights into the region's new political and military environment. But air power's very versatility – the speed with which commanders can deploy it and the potential swiftness of its application – makes it one of the most politically sensitive elements of a state's military arsenal. In addition, advanced aircraft are appearing in the region. Peru's recent purchase of Russian-made MiG-29s marks a qualitative change in the type of tactical aircraft flown by South America's air forces. Apart from the 24 F-16s purchased by Venezuela in 1982, they are the first fourth-generation fighters in the region.² It may presage the acquisition of similarly capable aircraft by other governments in the region.

Air force modernization in the Southern Cone is asymmetrical. The Chilean Air Force (FACH) has become perhaps the most balanced and capable air force in the region. Its budgets have declined in recent years, but only to a limited and lesser degree than those of neighboring air forces. Funds for acquisitions have not declined. They are independent of the regular FACH budget and not subject to normal Chilean congressional oversight. The FACH is currently considering the purchase of a squadron of fourth-generation European or US fighter aircraft. Argentina has done little to recapitalize its armed forces since the end of military rule in 1983. This has significantly weakened the Argentine Air Force (FAA). While the FAA is modernizing to some extent, these years of austerity have reduced its effectiveness. The Argentine government shows no interest in reordering its economic priorities in order to upgrade the FAA's capabilities.

This asymmetry poses a challenge to political and military leaders in both countries. As politically sensitive acquisitions of tactical aircraft move forward both governments will

² "Fourth-generation fighters, designed during the 1960s and 1970s, include the US-designed F-14, F-15, and F/A-18; the Soviet-built Su-27 and MiG-29; and the European Mirage 2000." *A Look at Tomorrow's Tactical Air Forces*, [Washington, DC:] Congressional Budget Office, Jan. 1997, 15.

need to work to reduce misunderstandings and dissipate political pressures such as acquisitions might impose on decision-makers in their neighbor's capital. The proper perspective from which to view this problem is not that it threatens war, but that – if poorly managed – it threatens to impede closer regional cooperation. The military balance is only one element in the increasingly close and complex bilateral relationship. Allowing force modernization efforts to interfere with the consolidation of political and economic relations is in the interest of neither government. That is why Chile and Argentina should aggressively pursue CBMs and transparency in the formation of defense policies, the conduct of military operations, and in military budgeting and acquisitions. It is in the interest of both to eliminate tensions that might corrode the sense of confidence needed to deepen economic and political relations. Failure to do so risks slowing economic integration and the resolution of pending disputes. These – and not traditional conceptions of national security – are the real issues of national interest in the Southern Cone. Confidence rather than air power is the fundamental issue.

Selling Aircraft in the Southern Cone

Attempts to place a technological ceiling on the capabilities of conventional military equipment sold to governments in the region will not succeed. The modernization horse is out of the barn. Too many governments in Europe, North America, and elsewhere are selling off excess defense equipment as they reduce the size of their armed forces in the wake of the Cold War. Too many defense firms, faced with shrinking domestic demand for their products, are seeking foreign markets.

In the current environment, neither the United States, nor any other government, can effectively set a ceiling on aviation technology flowing to South America and its Southern Cone. Limits will come on the demand side – if at all – because current supply is simply too great. Instead of trying to artificially limit supply of military aircraft, interested governments should put their political and diplomatic energies into initiatives to build political and economic stability in the region. In the military sphere, they can do so by promoting multilateral service-to-service contacts and concrete political

initiatives – such as a resolution of the last border dispute between Chile and Argentina – that will lessen the importance of military power in assuring regional security.

South America's Quiet Revolution

Argentina and Chile have made rapid political and economic gains since the early 1980s, sharing in larger hemispheric and global trends. Their armed forces have participated in those changes. Democratization, domestic economic reforms, regional economic integration, and the end of the Cold War have contributed to declines in regional political and military tensions. While not in themselves guarantees of peaceful relations in the region,³ they have made South America and the Southern Cone more secure.

This new political context has prompted cuts in military spending by most South American governments, as well as debates over defense requirements and appropriate roles for the armed forces. These debates naturally follow different courses in Argentina and Chile, reflecting different histories and interests.

This paper considers first the regional context, including the evolution of Argentine-Brazilian relations and the impact of Mercosur; the 1995 border war between Ecuador and Peru and its impact on regional security; and Argentine-British relations in light of the still unresolved sovereignty dispute over the Falkland/Malvinas Islands. It then considers relations between Chile and Argentina and addresses trends in defense spending in both countries and the force structures of the FACH and the FAA.

The Context

In the late 1970s, military or authoritarian regimes dominated most of South America. In the 1980s, the continent dismissed these regimes from power and established democratic governments.⁴ When Uruguay hosted a Latin American summit in 1967, dictators led nearly a dozen of the hemisphere's countries. When the United States hosted the Summit of the Americas in December 1994, thirty-four democratically elected heads of government gathered in Miami as leaders of an entire continent, apart

³ Demonstrated by tensions along the Venezuela-Colombia border and the 1995 fighting between Peru and Ecuador.

⁴ Countries that reestablished democratic governments between 1979 and 1990 included Ecuador in 1979, Peru in 1980, Bolivia in 1982, Argentina in 1983, Brazil in 1985, Paraguay in 1989, and Chile in 1990.

from Cuba.⁵ Political scientists Howard Wiarda has called some of the governments these leaders represent “half-way houses” to democracy: Places where the democratic culture lags behind the adoption of democratic forms. Yet he has also emphasized that such half-way houses are in themselves often major steps forward.⁶

Latin America’s political reforms began before the fall of the Berlin wall, but the Cold War’s end fundamentally changed the region’s security and defense policies. Many Latin American civil wars and insurgencies had deep domestic roots but flourished as proxy wars in the East-West conflict. When the Cold War ended, most of these conflicts died out or atrophied as external support sharply declined and old ideological battles lost relevance.

Most Latin American military services had viewed communism as their primary security threat. Their national security doctrines justified interventions in politics and anti-subversive war to defend against foreign influences, fostered extreme nationalism, and fed suspicions of territorial encroachment by neighbors.⁷ The armed forces organized themselves to respond to conventional threats but also to fight unconventional wars against domestic terrorism, subversion, and leftist political movements. A good example of how these concerns shaped force planning and acquisition is Argentina’s development in the late 1960s and early 1970s of the IA-58 Pucará. The Pucará is a twin engine turboprop aircraft designed for light attack and particularly counterinsurgency operations. Chile likewise acquired the A-37B Dragonfly to fulfill ground attack and counterinsurgency warfare roles.⁸

⁵ Antonio Pala, “The Increased Role of Latin American Armed Forces in UN Peacekeeping: Opportunities and Challenges,” *Air Power Journal*, Special Edition, 1995, 17-28, at 17.

⁶ Howard J. Wiarda, “Democratization to the South: Political Reform in the Southern Cone,” *Current*, Oct. 1995, 22-28, at 22.

⁷ Julio C. Carasales, *National Security Concepts of States: Argentina*, New York: United Nations Institute for Disarmament Research, 1992, 15-17; Leonardo Senkman, “The Right and Civilian Regimes, 1955-1976,” in *The Argentine Right: Its History and Intellectual Origins, 1910 to the Present*, (Wilmington, DE: Scholarly Resources, Inc., 1993), 119-145, at 141.

⁸ “IA-58 Pucara/Argentina,” March 20, 1990, and “A-37 Dragonfly/USA,” July 1, 1992, < Aircraft/Attack/Weapons/Systems/Platforms >, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

South America's armed forces also prepared themselves to act in disputes – primarily territorial – with their neighbors. Geopolitical views in fashion across the continent since at least the early years of the twentieth century have fostered intense territorial nationalism and prompted most South American militaries to regard their neighbors as potential adversaries.⁹ Chile shares borders with Argentina, Bolivia, and Peru. Argentina shares borders with Chile, Bolivia, Paraguay, Brazil, and Uruguay. For decades, competing territorial claims and other border disputes have acted as irritants to bilateral relations throughout the region. The establishment of democratic governments and new economic conditions have decisively undercut – although certainly not eliminated – the regional obsession with territorial nationalism. Along with the end of the Cold War, they have made most old justifications for a military role in politics and relatively large military establishments obsolete. Throughout the region, tensions and suspicions endure, but – with some exceptions – a new political and economic agenda predominates.

Mercosur

Regional economic integration and an opening of South American economies to global markets have played a major role in changing old attitudes. The most powerful engine driving these changes has been Mercosur. Former Argentine President Raúl Alfonsín and former Brazilian President José Sarney started the process in 1986 when they signed the General Agreement on Integration and Development.¹⁰ Their successors, Carlos Menem and Fernando Collor de Mello, pursued an even more ambitious agenda. Argentina, Brazil, Paraguay and Uruguay established Mercosur when they signed the Treaty of Asunción on March 26, 1991, with the goal of reducing tariff barriers among themselves and fostering regional economic cooperation.

⁹ Carlos Escudé, "Argentine Territorial Nationalism," *Journal of Latin American Studies*, May 1988, 139-165.

¹⁰ "Protocols on Economic Integration," *TELAM*, July 29, 1986, trans., *Foreign Broadcast Information Service, Latin American Daily Report*, July 30, 1986, B3-B6.

Along with the North American Free Trade Agreement, Mercosur is part of a hemispheric trend towards integration and liberalized trade. The Ouro Preto Protocol, signed December 17, 1994, set the final stamp of approval on Mercosur as a customs zone. It formally took effect on January 1, 1995. The Mercosur process is creating the world's fourth largest integrated market. Trade among its members has jumped from US \$4 billion in 1990 to US \$14.5 billion in 1995.¹¹ Although Chile is not a member, it has signed a treaty of association with Mercosur that took effect in October 1996. The agreement immediately eliminates tariffs on fifteen percent of Chilean exports to Mercosur, with most other tariffs phased out over the next eight years.¹²

A Border of Integration

Economic integration would have been unthinkable without a prior easing of military tensions and the establishment of democratic governments in Brasilia and Buenos Aires. Before Mercosur the two governments underwent a long process of removing barriers to cooperation. This process even preceded democratization. Along with Paraguay, they settled disputes regarding the development of the Itaipú Dam and the use of water and other resources along their common border in 1979.¹³ The Argentine and Brazilian Navies began bilateral exercises in 1978. By 1985 the two governments had begun a long process of harmonizing their nuclear policies. Until the early 1980s the US and other governments considered both as prime nuclear proliferation threats. They are threats no longer. Improved relations led to the Declaration on Common Nuclear Policy in 1990.¹⁴

The declaration created the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). Both governments and ABACC then negotiated an agreement with the International Atomic Energy Agency (IAEA) which requires

¹¹ "Remapping South America: A Survey of Mercosur," *The Economist*, Oct. 12, 1996, 4.

¹² Denise Chrispim Marin, "Chile começa hoje a se integrar ao Mercosul," *Folha de Sao Paulo*, Oct. 1, 1996, 2-3.

¹³ "Tripartite Agreement on Itaipú, Corpus Projects Announced," *Hoy*, Oct. 12, 1979, trans., *Foreign Broadcast Information Service, Latin America Daily Report*, Oct. 18, 1979, A1.

¹⁴ Pedro Luis de la Fuente, "Confidence Building Measures in the Southern Cone: A Model for Regional Stability," *Naval War College Review*, Winter 1997, Vol., L, No. 1, 37-65, 41.

application of IAEA safeguards to all Argentine and Brazilian nuclear materials and equipment.¹⁵ In addition, both have joined the Missile Technology Control Regime – Argentina in 1993, Brazil in 1996 – and canceled missile projects to do so. Argentina ended the Air Force's Cóndor II program and Brazil ended the Avibras SS series and the Orbita MB series.¹⁶

Along with Chile, both have signed the Treaty for the Prohibition of Nuclear Weapons in South America and the Caribbean (The Treaty of Tlatelolco).¹⁷ Both, along with Chile, signed the Mendoza Accord renouncing Chemical and Biological Weapons in September 1991.¹⁸ Paraguay, Uruguay, Bolivia, and Ecuador also later signed the agreement. Argentina also joined the Nuclear Suppliers Group in 1994 and signed the Non-Proliferation Treaty in 1995.¹⁹ To combat contraband trade, terrorism, and other criminal activities long associated with the border region Argentina and Brazil share with Paraguay, the three governments signed the Agreement on Security and Transit in the Three Borders Zone on March 18, 1996.²⁰

Granting that the foundation for cooperation preceded Mercosur, the Mercosur process itself has had a profound impact on political relations between Argentina and Brazil. In 1996, former Argentine Defense Minister Oscar Camilión called the Argentine-Brazilian

¹⁵ Mohamed Elbaradei, Edwin Nwogugu, and John Rames, "International Law and Nuclear Energy: Overview of the Legal Framework," *International Legal Framework (International Atomic Energy Agency)*, <<http://www.iaea.or.at/worldatom/inforesource/bulletin/bull373/rames.html>>, (Jan. 26, 1997).

¹⁶ Deborah Ozga, "A Chronology of the Missile Technology Control Regime," *The Nonproliferation Review*, Winter 1994, <<http://cns.miis.edu/npr/ozganpr.html>>, (Dec. 16, 1996).

¹⁷ Jon B. Wolfsthal, "Argentina, Brazil, and Chile to Implement Tlatelolco Treaty," *Arms Control Today*, Sept. 1992, 27; Robert Banks, *Nuclear Proliferation*, North Atlantic Assembly Report, AL 234, STC (94)S, Brussels: North Atlantic Assembly, 1994, <<http://www.netgear.com/pub/COUNTRIES/Nuke.proliferation.by.country>>, (Jan. 26, 1997).

¹⁸ "Joint Declaration on the Complete Prohibition of Chemical and Biological Weapons," (The Mendoza Accord), Sept. 5, 1991, *The Stimson Center*, <<http://www.stimson.org:80/pub/stimson/cwc/mendoza.htm>>, (Feb. 16, 1997).

¹⁹ Julio Carasales, "A Suprising About-Face: Argentina and the NPT," *Security Dialogue*, Vol. 27, No. 3, 1996, 325-335.

²⁰ "Acuerdo de los Ministros del Interior de la República Argentina, de la República del Paraguay y de la República Federativa del Brasil," *Confidence Building in the Southern Cone*, *The Stimson Center*, <<http://www.stimson.org:80/pub/stimson/cbm/la/tribord.htm>>, (Feb. 16, 1997).

border a "border of integration."²¹ The Brazilian army has deployed away from regions along the frontier with Argentina.

The Brazilian government articulated its revised defense priorities in November 1996. President Fernando Henrique Cardoso reportedly sent President Menem a copy of the defense policy statement prior to its release in Brazil. It effectively rules out the possibility of conflict on the border with Argentina.²² According to General Alberto Cardoso, President Cardoso's top military advisor, Brazilian defense policy should deter aggression and promote sovereignty and national unity. It should safeguard Brazilian resources, defend national interests abroad, 'project' Brazil internationally, and contribute to maintaining peace and international security. The Amazon is the focus of increased attention. "Mercosur," General Cardoso said, "has relieved us of many unnecessary rivalries and today the possibility of a conflict along the Southern border is almost zero."²³ Alieto Guadagni, former Argentine Ambassador in Brasilia, has echoed General Cardoso's views, "The two countries have ruled out once and for all the possibility of conflict arising between them."²⁴ Political exchanges, including close diplomatic consultations and frequent summit meetings between presidents, are now common.

In October 1996 the Argentine and Brazilian armies held their first joint exercises since the 19th century. *Operation Southern Cross*, held in the Northern Argentine province of Corrientes, simulated a joint Brazilian-Argentine peacekeeping operation under United Nations auspices. Argentine Defense Minister Jorge Domínguez explicitly linked economic integration and defense cooperation in calling *Operation Southern Cross* a sign of

²¹ "Argentina: Brazilian Daily Interviews Defense Minister," *O Globo*, Feb. 18, 1996, trans. *Foreign Broadcast Information Service*, FBIS-LAT-96-037, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

²² "Argentina: Brazil Reportedly Rules Out Possible Conflict With Argentina," *Noticias Argentinas*, Nov. 7, 1996, *Foreign Broadcast Information Service*, Nov. 7, 1996, FBIS-LAT-96-219, <<http://fbis.fedworld.gov>>, (Feb. 18, 1997).

²³ Bartolomeu Rodrigues and Tânia Monteiro, "Amazônia é prioridade de política de defesa," *O Estado de S. Paulo*, Nov. 3, 1996, <<http://www.estado.com.br/jornal/96/11/03/SEGU03.HTM>>, (Jan. 24, 1997).

²⁴ Fábio Lacerda Soares Petrarolha, "Rivals to March Side by Side," *The Bulletin of the Atomic Scientists*, Vol. 52, No. 5, Sept./Oct. 1996, 14.

"the advance of Mercosur."²⁵ The two governments plan to hold a similar exercise on Brazilian territory in 1997. This is not the only form of bilateral military cooperation. Brazilian officers and noncommissioned officers have served in Argentine units in peacekeeping operations in Cyprus, while Argentine peacekeepers have served in Brazilian units in Angola.²⁶ The upshot of the new political environment is a new attitude about security. Improved relations have greatly attenuated the sense of military threat that once existed on both sides of the border. Although both the Brazilian Air Force and Navy are planning upgrades and weighing new purchases of tactical aircraft, Argentines have not received the news with great concern.²⁷ Argentina's political leaders do not regard Brazilian military power as a threat to their security.

Ecuador and Peru

Chile views a less stable situation to its North. Although Chile and Peru have held regular military consultations since the 1980s, the government in Santiago cannot but look beyond its northern border with concern. On January 26, 1995, after a series of border incidents, Ecuador and Peru began a brief but intense war in the Cenepa River basin which vividly demonstrated the continued possibilities for armed conflict in South America. The two countries have contested the area since fighting a war in 1941 in which Ecuador lost a substantial amount of territory. Ecuador never reconciled itself to the defeat. The undemarcated area around the Cenepa has been a friction point for decades. Fighting had last broken out in 1981. Over 200 soldiers from both countries died in the 1995 fighting.

Both governments finally accepted mediation by the four guarantors of the 1942 Rio Protocol, drawn up after the 1941 war. Mediation by the guarantors – the United States,

²⁵ Ariel Palacios, "Manobras Brasil-Argentina não são para invadir," *O Estado de S. Paulo*, Sept. 30, 1996, <<http://www.estado.com.br/jornal/96/09/30/ARIEL30.HTM>>, (Jan. 24, 1997).

²⁶ "Argentina: Defense Minister Denies US Pressure in Drug Fight," *TELAM*, Jan. 20, 1997, trans. *Foreign Broadcast Information Service*, FBIS-LAT-97-014, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

²⁷ Stacey Evers, "Brazil Looks Worldwide for Fighter Candidates," *Jane's Defence Weekly*, Nov. 13, 1996, 6; Mario Roberto Vaz Carneiro, "Brazilian Navy Seeks A-4s for Carrier," *Jane's Defence Weekly*, Jan. 8, 1997, 5; Nick Cook, "Military Upgrade Market Attracting Too Many Players," *Interavia Business and Technology*, Sept. 1996, 53-56, at 56.

Argentina, Brazil, and Chile – led to a series of unstable cease-fires, followed by the deployment of the Ecuador-Peru Military Observers Mission (MOMEP), made up of officers from the guarantor countries.²⁸ Despite early suspicions on both sides of the border, MOMEP stabilized the situation and it has remained stable since September 1995. In October 1996, Peru and Ecuador agreed to negotiate until they have reached a final settlement.²⁹ Bilateral talks will resume in 1997.

Tensions remain, and air power is one of the sticking points. During the fighting, Peru's Air Force found itself outclassed by its Ecuadorian opponents. The Peruvians flew primarily Soviet-made aircraft acquired in the 1970s. The Ecuadorians flew mostly Israeli-made Kfir fighters. The Kfirs and Ecuador's superior command and control gave Ecuador air superiority during most of the conflict.³⁰

In early 1996, Ecuador took delivery – over strong Peruvian protests – of four modernized Kfir aircraft. Ecuador's Air Force had placed the order before the war began in order to replace retired aircraft. The deal was worth approximately US \$40 million. US-made General Electric J-79 engines power the Kfirs, and Peru asked the US government to block the sale. The US declined to do so. Ecuador is now reportedly talking with Israel about buying an additional squadron of Kfirs in 1997 or shortly thereafter. "The question is one of money, we are ready to unload as many Kfirs as they could buy," an Israeli industry source told *Defense News* in January 1997.³¹

In November 1996, Peru took delivery of at least four of a dozen MiG-29 fighters purchased from Belarus, paying a reported US \$350 to 380 million.³² The Mig-29 is a

²⁸ "Latin America: Political Developments," *The Military Balance 1995-1996*, (Oxford: Oxford University Press, 1995), 200.

²⁹ "Statement by the Press Secretary on the Peru and Ecuador Agreement," *The White House, Office of the Press Secretary*, Oct. 30, 1996.

³⁰ See, Gabriel Marcella, *War and Peace in the Amazon: Strategic Implications for the United States and Latin America of the 1995 Ecuador-Peru War*, [Carlisle Barracks, PA:] Strategic Studies Institute, US Army War College, 1995, 10-11.

³¹ Barbara Opall and Steve Rodan, "Ecuador Kfir Interest Ignites US Industry," *Defense News*, Vol. 12, No. 2, Jan. 13-19, 1997, 4 & 27.

³² "Peru," *Air International*, Feb. 1997, 69.

supersonic air superiority fighter roughly of the same size and class as the US Navy's F-18 Hornet. It can carry beyond-visual-range air-to-air weapons and perform ground attack missions but was primarily designed for close-in aerial combat. It entered service with the Soviet Air Force in 1985.³³ Peru's MiG-29s are the most advanced fighter aircraft in the region. President Fujimori has said Peru bought them to replace aging aircraft and aircraft lost in the war: "This is only a question of us maintaining the balance"³⁴ In December 1996 the Peruvians reportedly bought 14 Su-25 "Frogfoot" ground attack aircraft, also from Belarus.³⁵ Echoing Peruvian complaints earlier in the year, Ecuadorian officials protested the Peruvian aircraft purchases. "I do not think that renovation alone can account for the large quantity of armaments that Peru has acquired," Ecuadorian Defense Minister Víctor Bayas told the press in January 1997.³⁶ At least one Russian press report has said that Belarus cannot provide technical support and spares for the aircraft and that – having lost the sale – Mikoyan, the MiG-29's Russian manufacturer, will not do so.³⁷

General Fernando Rojas Vender, Commander of the Chilean Air Force, publicly minimized the importance of the Peruvian purchase of the MiG-29 aircraft, calling it "normal."³⁸ But the Ecuadorian and Peruvian purchases have clearly changed the rules of the tactical air acquisition game in South America. Although Peru's attention is focused on Ecuador, not Chile, Peru's MiG-29s are a factor in the regional balance that the Chileans must consider in shaping their own Air Force.

³³ Benjamin S. Lambeth, *From Farnborough to Kublinka: An American MiG-29 Experience*, Santa Monica, CA: Rand, 1991, 99.

³⁴ "Peru's President Confirms Purchase of Jets," *The New York Times*, Nov. 23, 1996, A4.

³⁵ David A. Fulgham, "Peruvian Air Force Buys Belarus SU-25s," *Aviation Week & Space Technology*, Dec. 2, 1996, 25.

³⁶ "Gobierno ecuatoriano critica rearme de Perú," *El Nuevo Herald*, Jan. 15, 1997, <<http://www.elherald.com>>, (Jan. 26, 1997).

³⁷ Anatoliy Sautin and Nikolay Novichov, "Peruvian Military Seems to Have Bought Wrong MiGs," *Finansovyye Izvestiya*, Dec. 17, 1996, trans., *Foreign Broadcast Information Service*, FBIS-SOV-96-245, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

³⁸ "Chile: Air Force Commander Says Purchase of Aircraft 'Normal,'" *La Tercera de la Hora*, Nov. 26, 1996, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-230, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

Bolivia

No territorial disputes exist between Bolivia and Argentina, although the Argentine government worries about illegal Bolivian immigration and the threat posed by narcotrafficking across the Bolivian-Argentine border.³⁹ Bolivia still claims that Chile unjustly cut it off from the sea in the 19th century War of the Pacific and claims a sovereign right of access to the Pacific. This remains as a constant irritant between Chile and Bolivia, which have had no diplomatic relations since 1962.⁴⁰ The possibility of conflict along the Chilean-Bolivian border remains a constant in military planning in both countries.

Britain's Security Concerns in the South Atlantic

While the British government recognizes "a graduated improvement in military relations" with Argentina,⁴¹ its policies towards the Argentine government are still cautious. Britain keeps approximately 2,000 troops in the Falkland/Malvinas Islands, including about 450 members of the Royal Air Force. RAF Mount Pleasant maintains four Tornado F-3 aircraft on the islands. A VC-10 K4 tanker from the 101st Squadron at RAF Brize Norton provides air-to-air refueling support for the Tornados. The tanker and ground crew change every four months. The aircrew changes every six weeks. A Hercules C-1K transport flies primarily maritime radar reconnaissance. Mount Pleasant is also home to a squadron of two Sea King HAR-3 and two Chinook HC-3 helicopters. Radar sites and RAF Rapier surface-to-air missile units located at various points on the islands support these air assets.⁴² This deterrence force is an expensive symbol of the

³⁹ See, Ricardo Larrendo, "El Control Aéreo, un Arma Letal Contra el Narcotráfico," *La Nación On Line*, April 27, 1997, <<http://www.lanacion.com.ar/97/04/27/g04.htm>>, (May 2, 1997).

⁴⁰ See, for example, "Bolivia Complains of Worsening Export Conditions through Chile," *Link Américas*, June 5, 1996, <<http://www.atamercas.com/pages/news/960605/minmed.4.htm>>, (May 2, 1997).

⁴¹ Sir Nicholas Bonsor, "Extracts From An Adjournment Debate In The House Of Commons," Oct. 18, 1995, <<http://www.parliament.the-stationery-office.co.uk/pa/cm199596/cmhansrd/cm951018/debtext/61024-06.htm>>, (Dec. 9, 1996).

⁴² F.E.T. Lewis, Deputy Command, Command Public Relations, Royal Air Force Strike Command, letter to author, Jan. 24, 1997.

British government's commitments to defend its dependent territory and islander self-determination. It costs the British government a reported UK £68 million a year.⁴³

In addition to stationing troops on the islands, Britain has maintained an arms embargo against Argentina since the Falkland/Malvinas war. It temporarily lifted its ban on selling spare parts to the Argentine Navy during Desert Shield/Desert Storm. Otherwise it has consistently lobbied the US government and other governments to keep arms sales to Argentina to a minimum. Following the Gulf War the Argentine Navy tried to buy Rolls Royce Tyne RM1 engines and engine components, but the British government again refused export licenses for any equipment designed or modified for military use.⁴⁴ The British government has allowed British firms to sell some "non-military" equipment to the Argentine armed forces. British officials, no doubt, have etched upon their memories the experience of fighting Argentine forces armed with tactical aircraft made in the US, France, and Israel; and artillery, ships, and Canberra bombers made in the United Kingdom.

A 1994 US sale of A-4M aircraft to the Argentine Air Force came only over the strong objections of the British government. Once the US government approved the sale the British lobbied strenuously to limit the level of sophistication of the avionics the aircraft could carry.⁴⁵ It took concerted lobbying by the Argentine Defense and Foreign Ministries in both London and Washington before Britain and the United States came to an agreement that allowed for installation of radars with more sensitive "early warning" technology.⁴⁶ Still, the Northrop/Grumman "ARG-1" radar will have its limitations. It will lack any beyond visual range capability to lock weapons onto targets before the pilot

⁴³ Tim Butcher, "Falklands gets its first Rolls-Royce as fishing licences net millions," *Electronic Telegraph*, April 15, 1996, <<http://www.telegraph.co.uk>>, (Jan. 7, 1997).

⁴⁴ Department of the Official Report (Hansard), House of Commons, "Parliamentary Debates (Hansard) Daily Part: House of Commons Hansard Written Answers for 5 Nov 1996 (pt 10)," Column: 441, <<http://www.parliament.the-stationery-office.co.uk/pa/cm199697/cmhansrd/cm961105/text/61105w10.htm>>, (Jan. 9, 1997).

⁴⁵ Nathaniel C. Nash, "US Approves Sale of Warplanes to Argentina," *The New York Times*, Feb. 6, 1994, A8.

⁴⁶ Ovidio Bellando, "La Argentina quiere que Londres levante el veto: Apuran la compra de radares," *La Nación On Line*, Nov. 9, 1996, <<http://www.lanacion.com/96/11/09/index.htm>>, (Nov. 9, 1996).

can see those targets. Shortly after the US approved the sale, a State Department official said, "Two or three British Tornados, which can see beyond the horizon, ... would wreak havoc with the whole squadron of the Skyhawks, they would be blown out of the sky before they knew what hit them."⁴⁷

The embargo grates with the Argentine government, which wants British recognition as a full member of the democratic community of nations. President Menem wants Britain to end the embargo as a sign of confidence in Argentina's political and economic reforms.⁴⁸

This is not to say that any kind of Cold War exists between the two countries. They resumed consular relations in 1989. They reestablished diplomatic relations in February 1990 under an agreement – the Madrid Accord – in which they agreed to set aside the issue of sovereignty over the islands. They also instituted information exchanges including – among other measures – a "hot line" between the British Foreign Office and the Argentine Foreign Ministry, regular exchanges regarding control of the waters and air space in areas around the islands, prior notification of movements of four or more military ships or aircraft and 25 days written notice of any maneuvers in the South Atlantic. Over time, the two governments agreed to broaden the information exchanges and cut the 25 days notice to 14.⁴⁹ In 1993 the two governments established an annual series of "Working Group" political consultations. In 1995 they negotiated an agreement to enable oil exploration to take place in the waters around the Falkland/Malvinas Islands and in adjacent Argentine waters. Exploratory drilling will begin in 1997.⁵⁰

⁴⁷ Nathaniel C. Nash, "US Approves Sale of Warplanes to Argentina," *The New York Times*, Feb. 6, 1994, A8.

⁴⁸ Tim Butcher, "Argentinean Army Chief Begins Visit To Britain," *Electronic Telegraph*, Nov. 4, 1996, <<http://www.telegraph.co.uk>>, (Jan. 7, 1997).

⁴⁹ Rut Diamint, Medidas de confianza mutua: realizaciones y propuestas para la Argentina, *Ser en el 2000*, No. 2, Sept. 1992, 70-76, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar>>, (Dec. 9, 1996); George D. Moffett, III, "Confidence-Building for Peace," *The Christian Science Monitor*, Sept. 24, 1992, 8.

⁵⁰ Tim Butcher, "Falklands gets its first Rolls-Royce as fishing licences net millions," *Electronic Telegraph*, April 15, 1996, <<http://www.telegraph.co.uk>>, (Jan. 7, 1997).

After signing the oil agreement, Malcolm Rifkind, then serving as Foreign Secretary, noted that it is "part of a wider process of an improvement of bilateral relations between the United Kingdom and Argentina," and he noted the significant increase in bilateral trade in recent years.⁵¹ Speaking for the British government in the House of Commons a short time later, the Secretary of State for Foreign and Commonwealth Affairs, Sir Nicholas Bonsor, called it "extremely welcome." He added that, "it demonstrates the fact that we can set aside our long-standing disputes over the sovereignty of the Falklands and re-establish good relations with Argentina."⁵²

Military cooperation and exchanges have also increased. British troops have served with Argentine troops, and even under the command of an Argentine general, as United Nations peacekeepers in Cyprus. In November 1996, Argentine Army Commander Lt. General Martín Balza, a veteran of the Falkland/Malvinas war, paid an official visit to London, becoming the first Argentine military leader of his rank to do so since the war.⁵³ Brigadier General Rubén Montenegro, current Commander of the FAA, visited London with a delegation of Argentine pilots while still FAA chief of operations in September 1996.⁵⁴

On the fundamental question – sovereignty over the islands – the sides remain far apart. Argentina calls Britain's possession of the islands "illegal and illegitimate." It refuses to drop its long-standing sovereignty claim but has forsworn any use of force to recover the islands. It says it wants "to negotiate a peaceful, just and lasting solution to the dispute."⁵⁵ Across the political spectrum, Argentines support their government's claim

⁵¹ "Edited Transcript of Press Conference by the Foreign Secretary, Mr. Malcolm Rifkind, New York, Wednesday, 27 September 1995," <http://ilingit.elmail.co.uk:2000/current/1995/sept/27/rifkind_pressconf_falklands-oil-agreement.txt>, (Jan. 8, 1997).

⁵² Sir Nicholas Bonsor, "Extracts From An Adjournment Debate In The House Of Commons," Oct. 18, 1995, <<http://www.parliament.the-stationery-office.co.uk/pa/cm199596/cmhansrd/cm951018/debtext/61024-06.htm>>, (Dec. 9, 1996).

⁵³ Alfredo Vega, "Balza recibió elogios británicos para sus tropas," *La Nación On Line*. Nov. 5, 1996, <<http://lanacion.com/96/11/05/index.htm>>, (Nov. 9, 1996).

⁵⁴ "Argentina: Air Force Delegation Tours Great Britain," *TELAM*, Sept. 9, 1996, *Foreign Broadcast Information Service*, Sept. 9, 1996, FBIS-LAT-96-179, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

⁵⁵ "Dateline: Buenos Aires, Argentina," *The Associated Press*, Jan. 2, 1997, AP-NY-01-02-97 2146EST, (Jan. 3, 1997).

to the islands. There is no significant body of opinion that favors renouncing the claim. The 1994 reform of the national constitution even included a reassertion of Argentine sovereignty.

Britain has said repeatedly that sovereignty is not on the table for discussion. In rejecting a late 1996 Argentine proposal for shared sovereignty over the islands, Michael Portillo, then serving as British Minister of Defence, said definitively, "we cannot discuss the sovereignty of the islands, or surrender them or share them."⁵⁶

Under the circumstances, although military relations have improved in recent years, they remain clearly limited. As Argentina will not renounce its claim to the islands, Britain continues its efforts to keep Argentine military capabilities circumscribed as one way to guarantee the lowest possible threat to the islands. Although Britain has made limited case-by-case exceptions to the arms embargo, it remains very much in place. In October 1996, Rifkind told the Commons that:

The Government have from time to time considered the partial relaxation of the arms embargo, and we have recognised that some relaxation could take place. However, we have concluded that the time is not yet right.⁵⁷

If the firms now setting up operations in the Falkland/Malvinas Islands find oil and drill it commercially, the Falkland Islands government will receive all subsequent tax revenue. Any such revenue is years down the road, but if the islanders strike it rich, the Falkland Islands Legislative Council already knows how it wants to spend some of the money. Firmly opposed to any deal on sovereignty, the Council has stated that – if the money comes – it will defray Britain's costs for the 1982 war and the continued maintenance of military forces on the islands.⁵⁸ British politicians from both government and opposition

⁵⁶ "Menem Floats Idea of Sharing Islands," *Chicago Tribune News Services*, Dec. 31, 1996, News, Document ID: S6366138, (Jan. 5, 1996).

⁵⁷ Malcolm Rifkind, *House of Commons Hansard Debates for 24 October 1996*, (Official Report, column 141), Oct. 1996, <<http://www.parliament.the-stationery-office.co.uk/pa/cm199697/cmhansrd/cm961024/debtext/61024-06.htm>>, (Dec. 9, 1996).

⁵⁸ Tim Butcher, "Argentina is Frozen Out of Oil Hunt," *Electronic Telegraph*, Oct. 29, 1996, <<http://www.telegraph.co.uk>>, (Feb. 7, 1997).

reacted favorably to the offer, but – oil or no – the position of Britain's current government is clear. After signing the oil agreement, Rifkind acknowledged to reporters that keeping troops in the South Atlantic costs a great deal, "but it is an expense we are quite prepared to bear for as long as it is necessary."⁵⁹

Tony Blair's Labour government is unlikely to abruptly change course. Shortly before the UK's 1997 election, Argentine Defense Minister Domínguez said he thought a Labour government would open "a new phase of review" in Falkland/Malvinas policy. Labour quickly declared that UK policy would not change: "There is not a shred of truth in the suggestion that there might be any change of policy towards the Falklands were Labour to be elected," a party spokesman said prior to election day. "If the Argentines are anticipating any change in the UK approach, they are mistaken and ignoring the clear message given both to the islanders and to the Argentine government over recent years."⁶⁰

Particular Experiences

This is the regional context in which Argentina and Chile find themselves: In some instances old threats endure, but war between Ecuador and Peru apart, tensions have eased and democratization and commitments to free-market economics and regional integration are the dominant trends. Yet democratization came to Chile and Argentina each in its own way. Their particular experiences under military rule, and particular democratic transitions, have shaped their armed forces.

Chile's armed forces overthrew President Salvador Allende Gossens on September 11, 1973. Argentina's most recent military regime – known as the Government of the

⁵⁹ "Edited Transcript of Press Conference by the Foreign Secretary, Mr. Malcolm Rifkind, New York, Wednesday, Sept. 27, 1995," <http://ilingit.elfmail.co.uk:2000/current/1995/sept/27/rifkind_pressconf_falklands-oil-agreement.txt>, (Jan. 8, 1997).

⁶⁰ Robert Shrimley, "Blair 'Would Do Falklands Deal,'" *Electronic Telegraph*, April 23, 1997, <<http://www.telegraph.co.uk>>, (April 28, 1997); George Parker, "Offspin: Spin Doctors Wage War on Argy Bargy," *Financial Times: UK Election '97*, April 23, 1997, <<http://www.ft.com/hippocampus/ftj57532.htm>>, (April 28, 1997).

Process of National Reorganization, or Proceso – seized power on March 24, 1976. The Chilean military conducted an anti-subversion campaign that led to numerous human rights violations. Likewise, Argentina's Proceso government became notorious for its often brutal suppression of left-wing subversion in the so-called "dirty war."⁶¹

In Chile, General Augusto Pinochet Ugarte suspended constitutionally guaranteed rights but also presided over wide-ranging political and economic reforms that made Chile a laboratory for free-market theory. While elsewhere in South America the 1980s was a decade of political progress it was – for most of the continent – "lost" economically. Chile was an exception to this trend. After a severe recession in 1982, it entered a period of sustained growth that has made its economic policies a model for much of the region and for countries around the world.⁶² The Chilean economy's annual growth rate has averaged 6.1 percent since 1985, and more than seven percent a year since 1990.⁶³ Today, Chile – a nation of 14.2 million people – boasts single digit inflation, a positive balance of payments, comfortable reserves, and roughly four percent unemployment.⁶⁴ Annual per capita income has risen to US \$4,850.⁶⁵ The Pinochet regime set the foundation for this economic success.

In contrast, Pinochet's counterparts in Argentina failed to find a successful economic formula and – despite a brief flirtation with prosperity – fought losing battles with

⁶¹ "Chile: Pinochet Assails Rights Report," *Facts on File World News Digest*, 1991, April 4, 1991, 248D2; Comisión Nacional sobre la Desaparición de Personas, *Nunca Más: The Report of the Argentine National Commission on the Disappeared*, New York: Farrar, Straus, and Giroux, 1986.

⁶² Jonathan Friedland, "The Master Plan: Two Decades Ago, Chile Gave the World a Privatization Model That Many Would One Day Follow," *The Wall Street Journal*, Oct. 2, 1995, R4 - R6.

⁶³ John S. Isbell, editor, *Western Hemisphere Diversification and Defense Market Assessment: A Comprehensive Guide for Entry into Overseas Markets*, [Washington:] US Department of Commerce, Bureau of Export Administration, Office of Strategic Industries and Economic Security, Sept. 1996, 69; Nancy Birdsall, "Economic and Social Reform in Chile is Lifting All Boats," *The Christian Science Monitor*, Dec. 30, 1996, 19.

⁶⁴ Bernard Cassen, "Cile, le sirene dell'oblio e i dividendi del liberalismo," *Le Monde Diplomatique/Il Manifesto*, Feb. 1995, <<http://www2.mmir.it/MondeDiplo/LeMonde-archivio/Febraio-1995/9502lm08.01.htm>>, (Jan. 13, 1997).

⁶⁵ "Remapping South America: A Survey of Mercosur," *The Economist*, Oct. 12, 1996.

inflation and debt. Argentina's foreign debt stood at US \$18.8 billion in 1978. It had shot up to US \$46 billion by 1983.⁶⁶

In the 1970s Pinochet's regime committed serious diplomatic and political missteps – including dustups over territorial claims with first Peru and then Argentina, but ultimately avoided conflicts with its neighbors. The Argentine Junta, however, blundered into the 1982 Falkland/Malvinas war and suffered a defeat that totally undercut the military's prestige and brought about the Junta's collapse.

The dirty war and the Falklands/Malvinas debacle provoked a deep crisis in the Argentine armed forces. The Proceso government's brutality and ineptitude permanently discredited military interventions in politics in the eyes of most Argentines.⁶⁷ Consequently, when Raúl Alfonsín took the reins of government as Argentina's democratically elected president on December 10, 1983, he took them from a divided and dispirited armed forces. His government put senior military leaders on trial for human rights abuses, forced the retirements of other top officers, and placed the Ministry of Defense and state-owned defense industries under civilian control. It also cut the privileges, size, and budgets of the military services. Some Alfonsín defense cuts came in response to economic problems, particularly in the later years of his administration, but he also cut defense to break the armed forces as institutions that might threaten democracy.⁶⁸ His actions set the stage for a series of ill-fated army rebellions, but also dramatically demonstrated the military's declining influence and set precedents for many other newly democratic governments in the region.

The Chilean junta administered government more effectively than its Argentine counterpart and Chile's experience with military rule lasted longer. The transition to democracy

⁶⁶ Paul H. Lewis, *The Crisis of Argentine Capitalism*, Chapel Hill, NC: The University of North Carolina Press, 1992, 488.

⁶⁷ Edgardo Catterberg, *Argentina Confronts Politics: Political Culture and Public Opinion in the Argentine Transition to Democracy*, Boulder, CO: Lynne Rienner Publishers, 1991, 5.

⁶⁸ Wendy Hunter, *State and Soldier in Latin America: Redefining the Military's Role in Argentina, Brazil, and Chile*, Washington: United States Institute of Peace, 1996, 13.

began only in 1988, after General Pinochet lost a national plebiscite on the continuation of his rule. Between 1988 and 1990 the armed forces and Chile's political parties negotiated the terms of transition and the shape of the new political system. After national elections in December 1989, Pinochet handed over power on March 11, 1990, to a Christian Democratic President, Patricio Aylwin Azócar, and a broad center-left coalition.

Pinochet and the Chilean armed forces left power largely on their own terms. Shortly after the 1988 plebiscite Chilean writer Manuel Antonio Garretón wrote that the manner in which his country was recovering its democracy would leave "enclaves" of military influence in areas of responsibility one would elsewhere expect to belong to elected civilian authorities.⁶⁹ Chile today lives under the 1980 constitution drafted by the Pinochet regime. That constitution gives the armed forces responsibility for defense, for national security, and for guaranteeing the country's "institutionality." The military enjoys significant political prerogatives and both the system of representation in Congress and the structure of a number of executive agencies grant privileges to conservative minorities.⁷⁰

Examples of military enclaves include the special super-majorities needed to reform the constitution and the continued influence of military officers and individuals nominated by the Pinochet regime in the National Security Council, the Constitutional Court, and the Supreme Court.⁷¹ The electoral system designed by the military regime gives overrepresentation to conservative parties. Appointed senators nominated by Pinochet – in alliance with elected conservative members – have formed a blocking minority in the Chilean Senate since 1990. The Chilean Congress does not oversee roughly 30 percent of annual defense expenditures, the armed forces receive that portion from a tax on the national copper company's foreign sales. This will be discussed in greater detail below.

⁶⁹ Manuel Antonio Garretón, *The Chilean Political Process*, Boston: Unwin Hyman, 1989, 207-209.

⁷⁰ *Constitución Política de la República de Chile*, Supreme Decree No. 1150, *Diario Oficial*, Oct. 24, 1980.

⁷¹ Manuel Antonio Garretón, *The Chilean Political Process*, Boston: Unwin Hyman, 1989, 208-209.

The President cannot dismiss military officers from their duties and General Pinochet remains at the head of the Chilean Army until March 11, 1998.

Aylwin, Chile's first post-authoritarian president, and his successor, Eduardo Frei Ruiz-Tagle, have recognized that although they have governed with substantial popular support, a sufficiently broad consensus does not exist between government and opposition to quickly eliminate these enclaves. Consequently, both administrations have opted to endorse reforms but not needlessly expend political capital on issues beyond their control.⁷² So, while a break with the juntas of the past characterizes Argentine democracy, evolutionary change marks the Chilean experience.

Argentina was among the economic losers of the 1980s. By 1989, the economy was so bad that Raúl Alfonsín handed over the presidency – six months early – to Carlos Saúl Menem, a democratically elected successor. The rate of investment declined precipitously and the economy contracted. By 1987, government spending accounted for nearly 60 percent of GNP. Forty percent of government spending went to finance bloated state enterprises, such as the national oil, coal, and steel companies, the national railroads, and the military's own Fabricaciones Militares (FM).⁷³ By 1990, gross national income per capita was 23 percent less than in 1977.⁷⁴

In 1991, Menem's administration established a strict currency board program that tied the value of Argentina's currency to the US dollar. "Convertibilidad" cut inflation from over 100 percent a month to nearly zero annually. The Argentine peso was still trading roughly at par with the US dollar in early 1997. The Menem administration slashed the size of government, privatized dozens of state-run firms, and opened the economy to

⁷² Claudio Fuentes, "Política de defensa en Chile: Desafíos para su construcción," *Ser en el 2000*, No. 8, Oct. 1995, 51-59, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar/Archivo/d000c942.htm>>, (Jan. 31, 1997). Still, the Frei administration has worked to reduce the size of those enclaves. It has sought, for example, to eliminate the appointed Senators from the Chilean Senate. See, "Cámara Baja Aprobó Fin de Designados," *El Mercurio Internet*, April 30, 1997, <<http://www.mercurio.cl/970430/a1.html>>, (April 30, 1997).

⁷³ Paul H. Lewis, *The Crisis of Argentine Capitalism*, Chapel Hill, NC: The University of North Carolina Press, 1992, 488.

⁷⁴ *Argentina: Reforms for Price Stability and Growth*, Washington: The World Bank, 1990, xi.

foreign investment and regional and global trade. FM and other Defense Ministry holdings – significant drains on the national budget – became high priority privatization targets. The government sold off non-military assets and closed military-owned and money losing steel mills and iron and coal mines.

Argentina experienced a dramatic turnaround. Its economy averaged seven percent growth annually between 1991 and 1994. It benefited greatly from foreign direct investment and the return home of Argentine flight capital, but suffered severely from the “Efecto Tequila” following Mexico’s disastrous late 1994 devaluation of its peso. Riding a wave of popular support for his economic policies, Menem brought about the 1994 constitutional convention, which allowed him to stand for reelection, and – despite the downturn of the economy in 1995 – win his second term by a decisive margin. Argentines decided to stay the course of reform. While Argentina – a country of 34.2 million people – remains South America’s wealthiest country, with an annual per capita income of US \$8,250, it enjoyed less robust economic performance after 1995.⁷⁵ While unemployment remains high, the economy has recovered from the Mexican shock, and prospects for future growth are strong.

Chilean-Argentine Bilateral Relations

Mutual suspicions have long characterized Chilean relations with Argentina. The two countries share a border more than 5,000 kilometers long, which runs atop one of the world’s highest and most rugged mountain ranges. Defining it has been a challenge almost since independence. That, and the 19th century competition to settle Patagonia and Tierra del Fuego created – on each side of the border – a sense that their neighbor had usurped rights to territory and resources.⁷⁶

Relations reached a low point in the 1970s, after Chile and Argentina had submitted their dispute over the Beagle Channel and its islands of Lennox, Nueva, and Picton to

⁷⁵ “Remapping South America: A Survey of Mercosur,” *The Economist*, Oct. 12, 1996.

⁷⁶ Luis Alberto Romero, “El enemigo externo,” *Clarín*, Nov. 12, 1996, *Ser en el 2000 Database*, Nov. 13, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cc05.htm>>, (Jan. 31, 1997).

arbitration. Under the terms of the 1902 bilateral General Treaty of Arbitration and a 1971 arbitration agreement concerned particularly with the Beagle Channel, the two governments referred the dispute to the British Monarch. Argentina resisted British arbitration because of the continued Anglo-Argentine dispute over the Falkland/Malvinas Islands. In order to allay Argentine concerns, Her Majesty agreed to accept the findings of a court of arbitration composed of five members of the International Court of Justice. That court ruled in favor of Chile in 1977, but Argentina rejected what was to have been a binding decision in early 1978.⁷⁷ Both governments mobilized their military forces and by late 1978 the countries were on the verge of war. At that point, Pope John Paul II offered his good offices as mediator. The respective military juntas accepted the offer and stepped back from the precipice.

Vatican mediation bore fruit in 1984, when the Military Junta in Chile and the Alfonsín administration in Argentina signed the Treaty of Peace and Friendship and reached a comprehensive settlement of the Beagle Channel dispute. The settlement gave Chile the islands and, apart from a 12 mile zone around them, left the territorial waters to Argentina.⁷⁸

The treaty committed Chile and Argentina to more than resolution of a border impasse. Both bound themselves "to preserve, reinforce, and develop their bonds of unalterable peace and perpetual friendship." They established mechanisms for the peaceful resolution of future disputes.⁷⁹ While the spirit of that declaration may have remained rather sterile so long as General Pinochet remained in power, the Beagle Channel settlement allowed Chile and Argentina to reach other bilateral agreements after the restoration of Chilean democracy. They had stepped away from conflict, resolved a century-old border dispute, and set the stage for an ambitious process of economic

⁷⁷ Pedro Luis de la Fuente, "Confidence-Building Measures in the Southern Cone, A Model for Regional Stability," *Naval War College Review*, Winter 1997, Vol. L, No. 1, 36-65, at 48-49.

⁷⁸ James Nelson Goodsell, "Progress in Argentine-Chile Dispute," *The Christian Science Monitor*, Nov. 28, 1984, 14.

⁷⁹ Pedro Luis de la Fuente, "Confidence-Building Measures in the Southern Cone, A Model for Regional Stability," *Naval War College Review*, Winter 1997, Vol. L, No. 1, 36-65, at 52.

integration. As a result, relations today are closer than they have ever been in this century. In 1996, Argentine Defense Minister Jorge Domínguez said that “over the last six years, we have made greater strides than over the last 50 years.”⁸⁰

In 1991, Chile and Argentina took an important step towards economic integration by signing the Agreement on Economic Harmonization. The Agreement reduced trade barriers and promoted cross-border investment. Initiated a process of integration that culminated in Chile’s 1996 association with Mercosur.⁸¹ That same year, the Menem-Aylwin Treaty established a framework for settling 24 outstanding border disputes and led to the rapid resolution of 22 of them. The two governments submitted one, regarding an area known as the Laguna del Desierto, to arbitration by a panel of Latin American jurists. The Tribunal ruled in favor of Argentina in October 1994. Chile contested, but ultimately accepted, the ruling.

The governments negotiated a settlement regarding an area known as the Hielos Continentales/Campos de Hielo Sur in 1991.⁸² Neither Congress has yet ratified the agreement. In an attempt to jump-start the ratification process in both Chile and Argentina, Presidents Frei and Menem signed a supplemental protocol to the original treaty in December 1996. The new protocol is an attempt to answer criticisms of the Treaty raised in both congresses.⁸³ The effort has not prospered because popular support for ratification is limited on both sides of the border. That the treaty has languished for so long unratified and with little popular support points out a major challenge in increasing cross-border cooperation, even in a democratic age. Traditions of mistrust and

⁸⁰ Patricio González Cabrera, “Argentina: Defense Minister Says Relations with Chile ‘Excellent,’” *El Mercurio*, Oct. 13, 1996, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-205, Oct. 23, 1996, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

⁸¹ Francisco Rojas Aravena, “La integración en el Cono Sur en un momento crucial,” *Ser en el 2000*, No. 7, March 1995, 10-12, *Ser en el 2000 Database*, <<http://ser2000.overnert.com.ar/Archivo/d000c684.htm>>, (Jan. 31, 1997).

⁸² Marcela Rosana Donadio, *Política de defensa y misiones de las Fuerzas Armadas en el marco de la integración regional y del nuevo contexto internacional: Argentina y Cono Sur*, Buenos Aires: Conicet, 1995, *Ser en el 2000 Database*, <<http://ser2000.overnert.com.ar>>, (Jan. 31, 1997).

⁸³ “Frei and Menem Sign Protocol,” *Chip News: Chile Information Project*, Dec. 11, 1996, <<http://www.chip.cl/chips/1996/12/11/2.html>>, (Dec.19, 1996).

perceptions of threat die hard, particularly in the popular imagination. Chile and Argentina are finding the resolution of this last border dispute a painful and politically divisive experience.⁸⁴

Defense Spending

The different experiences discussed above give civil-military relations in Chile and Argentina different characteristics. Argentine political leaders enjoy a degree of control over their armed forces still unknown by their Chilean counterparts. The Chilean armed forces control their own destinies to a degree unknown by their Argentine brethren. In the Chilean case the military enjoys a range of privileges, but the most important prerogatives are fiscal. Chile's military leaders play a bigger role in setting their own budget priorities than their Argentine counterparts. The Chilean Congress neither appropriates nor oversees 30 percent of military funding, effectively the entire acquisitions budget. That is the defining fact that separates Argentine and Chilean contemporary civil-military relations. So it is time to follow the money.

Yet discussing South American military budgets is hard. The region's defense ministries have ridden the same economic roller coasters as everyone else over the last twenty-five years. Secrecy and limited congressional oversight of national security activities are legacies of past military rule and even older traditions of broad prerogatives for the executive branches of government. Past inflation, hyper-inflation, and changes in currencies make it hard to compare budgets across time. Consequently, public information is often vague, often incomplete. Too many items are "off-budget" – or have been in years past – to say that published data tell the full story.

⁸⁴ "Reunion de legisladores Chilenos y Argentinos: Sin Acuerdo por los Hielos," *Clarín Digital*, Nov. 28, 1996, <<http://www.clarin.com.ar/diario/96-11-28/T-01601d.htm>>, (Jan. 6, 1997); "Impulsan en el Congreso un plebiscito por los Hielos," *La Nación On Line*, Dec. 13, 1996, <<http://www.lanacion.com.ar/96/12/13/p01.htm>>, (Jan. 7, 1997); "Hielos: El Congreso debería rechazar el acuerdo con Chile," *La Nación On Line*, Jan. 6, 1997, <<http://www.lanacion.com.ar/97/01/06/p01.htm>>, (Jan. 6, 1997).

The data presented here come from a number of sources.⁸⁵ It is hard to compare figures across sources. Take them not as infallible, but as indicators of trends and the general shape and scope of defense spending in the region.

Relatively Low Levels of Defense Spending

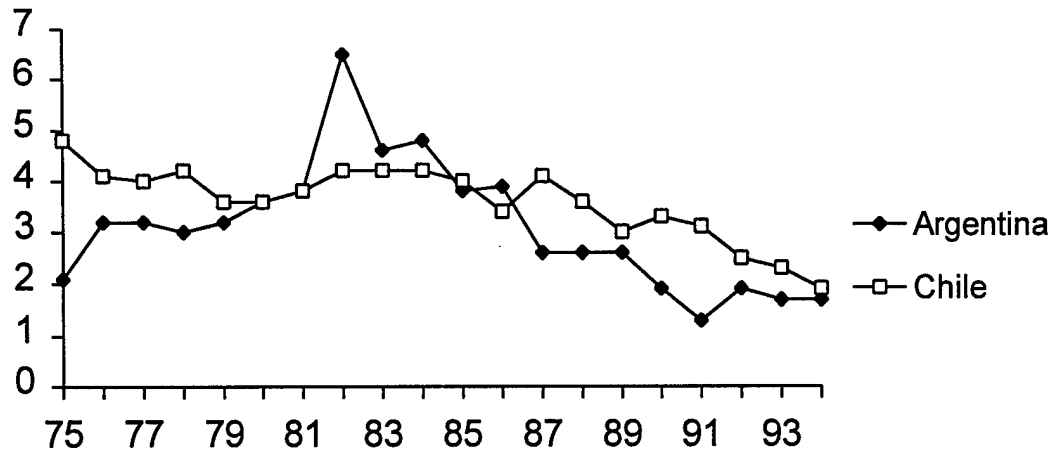
South American governments do not spend large sums on their defense. In world terms they never have. Even in the late 1970s and early 1980s – the height of military rule in South America – the region lagged behind the rest of the world in defense spending.⁸⁶ Democratization and economic reforms have played major roles in driving down Latin American defense budgets even further.

Across the continent, defense spending has declined notably in recent years from 2.4 percent of Gross National Product (GNP) and 9.1 percent of central government spending in 1984 to 1.4 percent of GNP and 6.9 percent of central government spending in 1994, according to the US Arms Control and Disarmament Agency (ACDA). North American governments spent 3.9 percent of GNP on defense in 1994. The world average was 3.0 percent. Chile and Argentina both lagged behind even the regional average – Argentina spent only 1.7 percent of GNP on defense in 1994, Chile only 1.9 percent. According to ACDA's figures, Argentina's estimated GNP that year was US \$278.2 billion, Chile's was US \$50.35 billion. Figure 1 shows the downward trend of the defense burden on the Argentine and Chilean economies in recent years.

⁸⁵ US Arms Control and Disarmament Agency, Stockholm International Peace Research Institute, International Institute for Strategic Studies, official Argentine and Chilean sources, and press accounts.

⁸⁶ Patrice Franko, "Defacto Demilitarization: Budget Driven Downsizing in Latin America," *Journal of American Studies and World Affairs*, Vol. 36, No. 1, Spring 1994, 37 - 74, at 38-39.

Figure 1: Chilean and Argentine Military Expenditures, 1975 to 1994 as a percentage of GNP

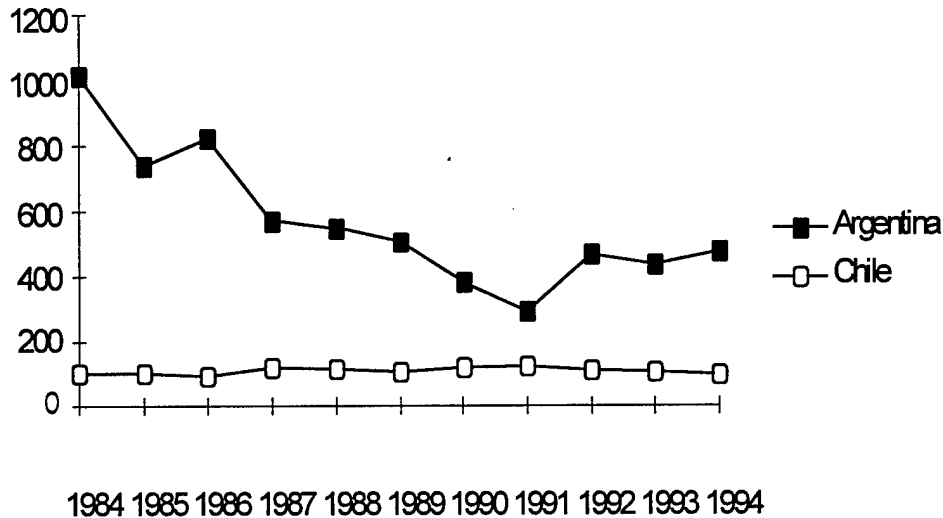


Source: US Arms Control and Disarmament Agency

Figure 2 shows ACDA's estimates of Argentine and Chilean defense expenditures in constant 1994 dollars. In Chile's case, ACDA has noted that their figures probably omit a major share of total military expenditures, including expenditures on acquisitions, an issue addressed in greater detail below.⁸⁷

⁸⁷ *World Military Expenditures and Arms Transfers*, Washington: US Arms Control and Disarmament Agency, 1996, 102.

Figure 2: Chilean and Argentine Military Spending, in Constant Prices, 1984 to 1994, in millions of US Dollars, 1994 prices.⁸⁸



Source: US Arms Control and Disarmament Agency

Still, Southern Cone military spending is undeniably low, and two brief comparisons can help put it in context. ACDA estimates that Canada, with its smaller population but larger economy than Argentina, spent roughly twice as much on defense as Argentina in 1994. During the same year, South Korea spent approximately US \$13 billion on defense while Argentina, Brazil and Chile together spent only slightly over US \$12 billion.⁸⁹

In the 1990s, the public sector has shrunk relative to the size of South America's national economies. Defense establishments now must compete for their budgets directly with other public programs or face the prospect of soon doing so. Democratic governments can afford to focus less on defense and more on combining economic growth with a commitment to social justice and – to use the words of Chilean Finance Minister

⁸⁸ *World Military Expenditures and Arms Transfers*, Washington: US Arms Control and Disarmament Agency, 1996, 62, 68.

⁸⁹ *World Military Expenditures and Arms Transfers*, Washington: US Arms Control and Disarmament Agency, 1996, 42, 45, 53-58.

Eduardo Aninat – assure that their countries are “modernizing with equity.”⁹⁰ In the 1980s, economic stagnation placed some limits on defense spending in the region, but the armed forces – still wielding political clout – generally defended their budgets even as national economies shrank.⁹¹ Today, politically weaker militaries find that national economies are growing, but growth in defense spending lags.

The authors of defense budgets in Argentina and Chile have changed significantly from the days of the juntas. Today’s democratic leaders, focused on economic agendas, do not see the world in the same way as their military predecessors. Yet Argentina and Chile, each in its own way, live with the consequences of past military spending policies.

Chilean Military Expenditures

As noted above, Figure 1 shows how the defense burden on Chile’s economy has steadily declined since at least the early 1980s. It has fallen in real terms since 1987,⁹² and that fall has accelerated since the restoration of democracy in 1990. According to Vicente Sota, Chairman of the Defense Commission in the Chilean Chamber of Deputies, defense took 16.8 percent of government expenditures in 1990, but only 8.6 percent in 1996.⁹³ According to a Chilean analyst with ties to the Army, from 1989 to 1996 Chile’s economy grew 57 percent in real terms while the defense budget grew by only 19.4 percent.⁹⁴ Government spending priorities have shifted. In 1990, the government spent one and a half times as much on defense as on education, four times more than on health,

⁹⁰ “Chilean Finance Minister Aninat Interviewed,” *El Mercurio*, Jan. 21, 1996, trans. *Foreign Broadcast Information Service*, FBIS-LAT-96-017, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

⁹¹ Patrice Franko, “Defacto Demilitarization: Budget Driven Downsizing in Latin America,” *Journal of American Studies and World Affairs*, Vol. 36, No. 1, Spring 1994, 37-74, 39.

⁹² Thomas Scheetz, “The ‘Peace Dividend’ in Argentina and Chile; an Evaluation of Opportunities for Defense Conversion,” Bonn International Center for Conversion, 1995, <<http://bicc.uni-bonn.de/budget/data/Argentin/sheetz.htm>>, (Jan. 29, 1997).

⁹³ “Diputado Sota Defendió Actual Nivel De Gasto Militar,” *El Mercurio*, July 20, 1996, C4.

⁹⁴ Katherine Bauerle Ewert, “Las Cifras de la Discordia,” *El Mercurio*, May 18, 1996, *Ser en el 2000 Database*, Oct. 24, 1996, <<http://ser2000.overnet.com.ar>>, (Jan. 10, 1997); quoting Gen. Manuel Concha, ret., Academia Nacional de Estudios Políticos y Estratégicos (ANEPE), a former aide to Gen. Pinochet.

and six times more than on housing. In 1996, it spent 1.5 times more on education than on defense, 1.7 times more on health, two times more on housing.⁹⁵

Yet that is not the entire story. Defense spending is not subject to the same budgetary processes and controls as other parts of the national budget. To a significant degree, defense spending is one of Garretón's enclaves of military influence. The military enjoys wide discretion in defining its roles, in buying equipment, and in determining how it spends money. Civilian political leaders lack the clout needed to assert full control over the military or determine how and how much is spent on defense.

The Military Junta approved the *Ley Organica de las Fuerzas Armadas* four days before it relinquished power to President Aylwin. The law guarantees that the budgets of the armed services will not fall below the spending levels set in the 1989 national budget, adjusted for inflation.⁹⁶ Considering Chile's robust economic performance in recent years, and relatively low inflation, the armed forces might have done better for themselves by indexing their budget to the economy's rate of growth rather than to inflation, but the arrangement does place a solid floor beneath the regular budget.⁹⁷ In addition, Chile's armed services have an important independent source of income: They receive funds appropriated by Chile's Congress in the annual defense budget, but also ten percent of the annual gross export revenues of the state-owned Corporación Nacional del Cobre de Chile (Codelco), the national copper company.⁹⁸ Figure 3 shows one analyst's estimate of the military's copper revenues from 1974 to 1996. This endowment arrangement is exceptional, but not unique in South America. Ecuador's armed forces

⁹⁵ "Diputado Sota Defendió Actual Nivel De Gasto Militar," *El Mercurio*, July 20, 1996, C4.

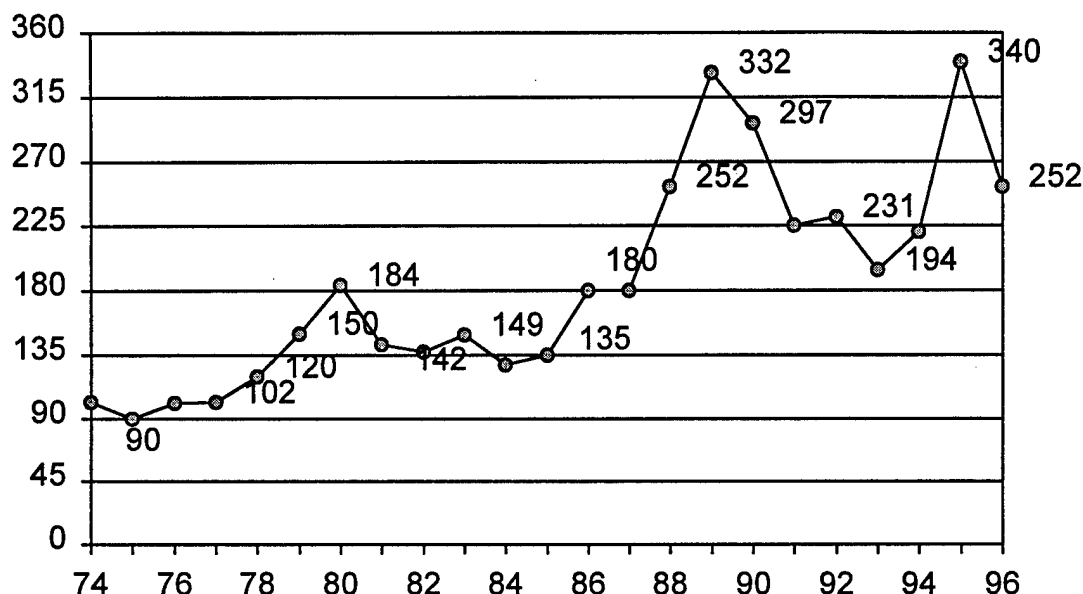
⁹⁶ Guillermo Pattillo, "El gasto de las fuerzas armadas de Chile: Evolución y estructura 1970-1990," *Ser en el 2000*, No. 4, Sept. 1993, 11-18, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar>>, (Oct. 18, 1996).

⁹⁷ Manuel Délano, "Chile aprovecha la bonanza económica para rearmarse y modernizar su ejército," *El País Digital*, Feb. 11, 1997, <<http://www.elpais.es/p/d/19970211/internac/chile.htm>>, (Feb. 12, 1997).

⁹⁸ John S. Isbell, editor, *Western Hemisphere Diversification and Defense Market Assessment: A Comprehensive Guide for Entry into Overseas Markets*, [Washington:] US Department of Commerce, Bureau of Export Administration, Office of Strategic Industries and Economic Security, Sept. 1996, 69.

receive an estimated 12.5 to 15 percent of the income from taxes foreign oil companies operating in the country pay on their profits.⁹⁹

Figure 3: Estimated Copper Fund Contributions to Chile's Defense Budget, 1974 to 1996, in millions of US dollars¹⁰⁰



Source: Armen Kouyoumdjian

Chile is the world's largest copper producer, with about 29 percent of global aggregate production in 1994. Roughly forty percent of the country's export revenues come from copper. Codelco – the world's leading copper-producing firm – produces about half of all Chilean copper.¹⁰¹ In recent years, with world copper prices generally high, Codelco has turned over from US \$200 million to well over US \$300 million to the armed forces

⁹⁹ Gabriel Marcella, *War and Peace in the Amazon: Strategic Implications for the United States and Latin America of the 1995 Ecuador-Peru War*, [Carlisle Barracks, PA:] Strategic Studies Institute, US Army War College, 1995, 13.

¹⁰⁰ Armen Kouyoumdjian, Armen Kouyoumdjian Country Risk Analysis, Viña de Mar, Chile, Facsimile message to US Naval War College Library for author, March 1, 1997.

¹⁰¹ "Metals – Non-Ferrous, Basic Analysis," *Standard & Poor's Industry Surveys, Vol. 2*, [New York:] Standard & Poor's, Oct. 1996, 86.

annually.¹⁰² In 1994, the armed services received US \$237 from Codelco. In 1995, they received US \$340.6 million.¹⁰³ The government's annual defense budget accounts for roughly 70 percent of all military spending and finances the operating budgets of the services, a very large percentage of which are personnel costs. Copper funds – earmarked for acquisitions – account for about 30 percent of all military spending. The structure of the budget has changed markedly from a quarter century ago. In 1970 the operating budget accounted for 90 percent of all spending, 98 percent in 1973.¹⁰⁴

The idea of reserving copper revenues for national defense dates from the late 1950s. The Chilean Congress adopted Law 13.196 in 1958 following a border incident with Argentina in the Beagle Channel. It initially set aside ten percent of Chilean copper profits for acquisition of naval assets. The Allende government nationalized the copper industry in the early 1970s, forming Codelco, and after the coup, the Pinochet regime stuck its hands deep into Codelco's pockets. In 1973 it expanded the reach of Law 13.196 by taxing the firm's foreign copper sales and fixing a floor beneath its support for the military at US \$90 million. It divided this money equally among the three services.

It changed the reserve law again in 1985. Law 18.445 lumped sales of all copper subproducts into the mix, doubled the minimum income floor to US \$180 million, and introduced an automatic readjustment mechanism tied to the US inflation rate. This guaranteed floor allows the armed forces to plan for purchases over the long-term.¹⁰⁵ In the first two years after Law 18.445 took effect, the reserve tax failed to meet the minimum. The Chilean government had to kick in US \$38 million in 1986 and US \$25

¹⁰² "Military Harvests US \$200 Million from CODELCO," *Chip News: Chile Information Project*, March 1, 1995, <<http://www.chip.cl/chips/1995/03/01/14.html>>, (Dec. 9, 1996);

¹⁰³ "Mining News Roundup," *Chip News: Chile Information Project*, July 17, 1996, <<http://www.chip.cl/chips/1996/07/17/5.html>>, (Dec. 9, 1006); Margaret Orgill, "Chile's Codelco Reports 1995 earnings \$1.76 BLN," *Reuters Financial Service*, March 8, 1996, News/Wires, *Lexis-Nexis*, Dayton, OH: Lexis-Nexis, (Jan. 23, 1997).

¹⁰⁴ Guillermo Pattillo, "El gasto de las fuerzas armadas de Chile: Evolución y estructura 1970-1990," *Ser en el 2000*, No. 4, Sept. 1993, 11-18, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar>>, (Oct. 18, 1996).

¹⁰⁵ "Chile: Defense Minister Begins US Visit, To Sign Memo, *El Mercurio*, July 15, 1996, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-138, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

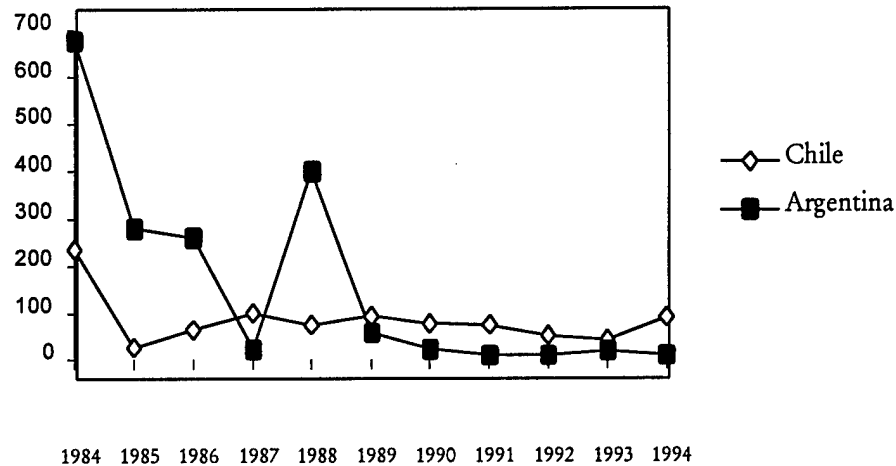
million in 1987 to make up the difference. Measured in constant dollars, military revenues from copper increased more than 270 percent from 1970 to 1990.¹⁰⁶ As arms sales elsewhere in the region have declined, this has made Chile one of South America's leading investors in arms.¹⁰⁷

Arms imports into the region are one indicator of the virtues of the copper endowment for Chile's military planners. Figure 4 shows how Chile, in buying foreign military equipment, has – over the last decade – avoided the feast or famine acquisition cycles experienced by Argentina, and by other neighbors as well. What the chart does not show is that the armed forces have already committed substantial copper revenue to future acquisitions. The guarantee of a steady income allows for medium and long range planning unavailable to the Argentine armed forces, and – to their credit – the leaders of the FACH and of Chile's other services have done an excellent job of managing these resources and the acquisition process generally.

¹⁰⁶ Guillermo Pattillo, "El gasto de las fuerzas armadas de Chile: Evolución y estructura 1970-1990," *Ser en el 2000*, No. 4, Sept. 1993, 11-18, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar>>, (Oct. 18, 1996).

¹⁰⁷ Thomas Scheetz, "The 'Peace Dividend' in Argentina and Chile; an Evaluation of Opportunities for Defense Conversion," Bonn International Center for Conversion, 1995, <<http://bicc.uni-bonn.de/budget/data/Argentin/sheetz.htm>>, (Jan. 29, 1997).

Figure 4: Argentine and Chilean Imports of Military Equipment, 1984-1994, in millions of US Dollars.¹⁰⁸



Source: US Arms Control and Disarmament Agency

Before handing over power to President Aylwin in 1990, the Armed Forces signed a number of long-term procurement contracts, taking loans against future copper revenues. Doing so allowed them to set their own procurement agenda well into the 1990s and beyond and assured that the incoming government would not quickly try to cut the flow of copper money. The debts are, after all, not of the Armed Forces but of the national government.¹⁰⁹ The Chilean Air Force entered into a number of these contracts, securing upgrades for its F-5 and Mirage 50 aircraft and buying an airborne early warning aircraft from Israel.

Although various politicians have proposed ending the military's claims on Codelco funds – including former Codelco Executive President Juan Villarzú, now President Eduardo Frei's Chief-of-Staff – change is unlikely, at the very least until General

¹⁰⁸ *World Military Expenditures and Arms Transfers*, Washington: US Arms Control and Disarmament Agency, 1996, 112, 118. Statistics show actual imports for a given year, not contracts for future deliveries.

¹⁰⁹ "Diputado Sota Defendió Actual Nivel De Gasto Militar," *El Mercurio*, July 20, 1996, C4.

Pinochet retires in March 1998. The government has firmly rejected Codelco's privatization.¹¹⁰ Critics of the military within the governing coalition – such as Chamber of Deputies Defense Commission President Vicente Sota – have opted not to confront the military. A 1994 Frei administration review of the reserve policy and 1995 Chilean congressional hearings on rescinding the reserve requirement led nowhere.¹¹¹ Defense Minister Edmundo Pérez Yoma has said the requirement should be dropped “someday,” but that the government has no plans to add it to its agenda any time soon.¹¹²

On becoming Commission President in mid-1996, Sota defended the reserve law, “so long as no other mechanism can be found that by law guarantees an equivalent level of resources” to the Armed Forces.¹¹³ Politicians from left to right have adopted similar positions. Not only have reserved funds been committed well into the future, but trying to change the law would upset the uneasy truce between civilian authorities and the military. Frei could only change the reserve law if he could guarantee the military “an equivalent level of resources.” Frei – or any successor – would have to confront vigorous opposition from the military and its political allies to break the link between copper and military acquisitions.

Argentine Disinvestment in Defense

In Argentina, military spending sharply increased after the Proceso Junta seized control of the government in 1976. By 1982, defense spending accounted for 6.5 percent of GDP.¹¹⁴ In 1983, the Central Bank credited about US \$5 billion of Argentina's US \$43 billion external debt to arms purchases made after 1978. Immediately after the

¹¹⁰ “Chilean Finance Minister Aninat Interviewed,” *El Mercurio*, Jan. 21, 1996, trans. *Foreign Broadcast Information Service*, FBIS-LAT-96-017, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997)

¹¹¹ “Military Copper Income from Codelco,” Nov. 6, 1994, *Chip News: Chile Information Project*, <<http://www.chip.cl/chips/1994/11/09/1.html>>, (Dec. 9, 1996); “Mining News Roundup,” May 6, 1995, *Chip News: Chile Information Project*, <<http://www.chip.cl/news/search/bold.pl?c:\www.chipnews\1995\5\8\fn7.html>>, (Jan. 23, 1997).

¹¹² “Defense Budget Cuts Have Their Limits,” Sept. 14, 1994, *Chip News: Chile Information Project*, <<http://www.chip.cl/chips/1994/09/14/2.html>>, (Dec. 9, 1996).

¹¹³ “Diputado Sota Defendió Actual Nivel De Gasto Militar,” *El Mercurio*, July 20, 1996, C4.

¹¹⁴ US Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1987*, (Washington, 1988), 48.

Falkland/Malvinas war, the Armed Forces went on a brief but expensive shopping spree to replace equipment lost in the conflict.¹¹⁵ Economic decline and the defense policies of Presidents Raúl Alfonsín and Carlos Menem combined to sharply reverse that trend.

Both democratic administrations have slashed away at defense spending. The armed forces, discredited by defeat, have been unable to resist the cuts. Throughout the early 1990s, a consensus seemed to exist in Argentina that the country faced no military threats to its security. This left defense spending – the largest category of discretionary spending in the budget – to serve as a fiscal safety valve for other national priorities.¹¹⁶ Since at least the early years of the Menem administration, austere defense budgets have given economic reformers crucial leeway in attacking fiscal deficits and restructuring the national economy. Growing concerns that the disinvestment in defense has gone too far have spurred a high-profile public debate on the future of the armed forces.

Proposals to reform the armed forces by promoting greater cooperation between the three services and granting the Ministry of Defense a multi-year budget still languished in the Argentine Congress in early 1997. The proposals include annual three to four percent spending hikes and authorization to incur a maximum of US \$1 billion in debt to fund acquisitions for the three services over five years.¹¹⁷ They have not prospered because although President Menem wants more effective forces – he has publicly acknowledged that defense expenditures “are not commensurate with requirements”¹¹⁸ – he wants neither to surrender his authority to shape the budget on an annual basis nor to allow the Defense Ministry to incur new debts.

¹¹⁵ “Argentina Restocks Arsenal With Tip-Top Fighters, Missiles,” *The Christian Science Monitor*, Jan. 12, 1983, 4.

¹¹⁶ *Argentina: From Insolvency to Growth*, [Washington:] The World Bank, 1993, 93.

¹¹⁷ Argentina, Chamber of Deputies, *Ley de Reestructuración de las Fuerzas Armadas* (Draft Legislation), 1996. Article 27 of the proposed legislation would use the 1995 defense budget a base-line budget for the three services and allow for modest increases in defense spending over five years.

¹¹⁸ “Menem Says Appropriations for Armed Forces Not Commensurate With Requirements,” *Noticias Argentinas*, Dec. 3, 1996, *Foreign Broadcast Information Service*, Dec. 5, 1996, FBIS-LAT-96-234, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

Under Alfonsín, defense spending fell to 2.7 percent of GDP by 1989.¹¹⁹ It has continued to decline in the 1990s. In 1984, shortly after the Junta handed over power to Alfonsín, Argentina had about 174 thousand men under arms and spent an estimated US \$10.13 billion dollars on defense.¹²⁰ By 1989, when Alfonsín left office, the armed forces had shrunk to 95 thousand and the defense budget had slipped to US \$5.06 billion. In the first years of his administration, Menem cut Defense Ministry civilian and military staffing by an additional 40 percent.¹²¹

In circumstances of severe economic crisis – including at one point an annual inflation rate of over 5,000 percent – Menem had few options. Political opponents from Alfonsín's Radical Civic Union political party agreed. In May 1990, National Deputy José Horacio Jaunarena, Alfonsín's former Defense Minister, wrote that:

Argentina needs well-paid and well-equipped armed forces with a budget commensurate with their needs, but the Nation is not in a position to allocate them amounts of money substantially greater than the amounts currently allocated.¹²²

By 1994, only 69 thousand people served in the Argentine armed forces and the budget had – after bottoming out below US \$3 billion in 1991 – risen to US \$4.7 billion.¹²³ As Figure 5 shows, Argentina now has smaller armed forces than Chile.

¹¹⁹ *Argentina: From Insolvency to Growth*, [Washington:] The World Bank, 1993, 94.

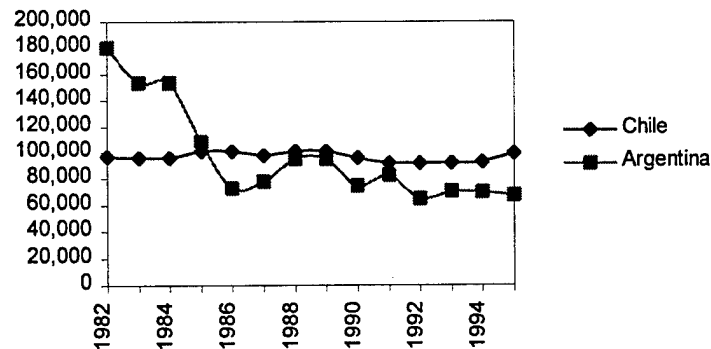
¹²⁰ Measured in constant 1994 dollars.

¹²¹ Paul H. Lewis, *The Crisis of Argentine Capitalism*, Chapel Hill, NC: The University of North Carolina Press, 1992, xvii-xviii.

¹²² José Horacio Jaunarena, "Fuerzas Armadas y modernización del Estado," *La Nación*, May 21, 1990, in Julio C. Carasales, *National Security Concepts of States: Argentina*, New York: United Nations Institute for Disarmament Research, 1992, 55.

¹²³ US Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1995*, Washington, 1996, 62.

Figure 5: Chilean and Argentine Armed Forces, 1982 to 1995



Source: *The Military Balance*, Various Years

Budget cuts have pushed the armed forces to the brink of financial collapse. Even as pay has fallen behind both the private sector and many parts of the bureaucracy – so much so that many members of the armed forces now have second jobs – personnel expenditures for all three services have risen from 32 percent of the defense budget in 1983, to just under 76 percent in 1994, to 83.5 percent in 1996.¹²⁴ All three services are dramatically smaller than a decade ago, but the personnel cuts have been both brutal and – oddly – inadequate. During most of this period, despite the reductions, current military personnel costs have remained constant at about one percent of GDP.¹²⁵

The armed forces may be far smaller than fifteen years ago, but the government is still paying off past defense-related debts. In addition, the defense-related pension burden bequeathed to the present government by the large military structures of the past is enormous.¹²⁶

¹²⁴ Thomas Scheetz, "The 'Peace Dividend' in Argentina and Chile; an Evaluation of Opportunities for Defense Conversion," Bonn International Center for Conversion, 1995, <<http://bicc.uni-bonn.de/budget/data/Argentina/sheetz.htm>>, (Jan. 29, 1997); "Restructuring = Reduction," Briefing Memorandum, Buenos Aires: Republic of Argentina, Ministry of Defense, 1996.

¹²⁵ *Argentina: From Insolvency to Growth*, Washington, DC: The World Bank, 1993, 94.

¹²⁶ Manuel A. Solanet, "El gasto militar en la Argentina: problemas y soluciones," *La Nación*, Jan. 17, 1996, *Ser en el 2000 Database*, <<http://www.ser2000.org.ar:80/demo/d000cbdf.htm>>, (Feb. 10, 1997).

The three services have yet to adjust their personnel structures to the end of conscription and the advent of voluntary military service. Although the ranks of officers are thinner than fifteen years ago, the reduction in the officer corps does not parallel the cuts in the lower ranks. The Air Force has virtually no enlisted personnel, but the number of FAA officers has barely declined since 1983. Even before conscription ended the services had cut back at the lower ranks but held on to officers and non-commissioned officers.

In the absence of firm guidance from either their civilian leadership or the Argentine Congress, the armed forces seem for many years to have been weathering a storm rather than restructuring. By not reforming the officer corps, "the military indicates that it views the reduction in personnel as a temporary measure, a way to live—in the short run – within a restricted budget." They retained their more senior cadres to protect jobs and pensions and in expectation that their forces would recover lost ground, and "on the assumption that enlisted men are more easily trained than officers."¹²⁷

As overall defense spending has declined, uncontrolled personnel costs have begun to overwhelm the budget – more of the Defense Ministry's declining resources have been concentrated in personnel costs and less in operations, maintenance, or investments in acquisitions. Across the three services, operational readiness has often been terribly low. This process began in the Alfonsín years, when the government cut spending on operations by over forty percent and on materiel by half.¹²⁸ Table 1 shows how Argentina's Defense Ministry devoted almost equal resources to personnel and to operations and maintenance during the Alfonsín years, but that starting in 1989 expenditures on operations and maintenance began to decline while personnel costs held roughly steady. A look at 1992's combined personnel, operations and maintenance, and procurement accounts shows that personnel took up almost 59 percent of the total,

¹²⁷ Patrice Franko, "Defacto Demilitarization: Budget-Driven Downsizing in Latin America," *Journal of Interamerican Studies and World Affairs*, Vol. 36, No.1, Spring 1994, 37-74, at 48-49.

¹²⁸ Patrice Franko, "Defacto Demilitarization: Budget-Driven Downsizing in Latin America," *Journal of Interamerican Studies and World Affairs*, Vol. 36, No.1, Spring 1994, 37-74, at 45.

operations and maintenance took up less than 34 percent, and procurement less than eight percent.

Table 1: Selected Argentine Ministry of Defense Expenditures,
1984-1992, in percent of GDP.¹²⁹

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Personnel	1.19	0.89	0.91	1.01	1.00	0.99	1.00	1.02	0.99
Operations & Maintenance	0.71	0.84	0.91	0.81	1.07	0.79	0.59	0.69	0.57
Procurement	0.12	0.14	0.18	0.38	0.27	0.19	0.07	0.12	0.13

Sources: Argentine Ministry of Defense & World Bank

The decline of Argentine military power and a shift in priorities has led some observers to say that the nation has fallen into a situation of defenselessness. An association of roughly two-thirds of the country's retired army generals created a stir in March 1997 when they released a scathing public critique of what they called the military's "grave crisis." While emphasizing their commitment to democratic government, they attributed this crisis to failures by the Alfonsín and Menem administrations to adequately provide for the national defense.¹³⁰

Political leaders such as Miguel Ángel Toma, President of the Defense Commission in the Argentine Chamber of Deputies, have expressed concern with the state of the armed forces, but have also looked at the broader regional situation: "It would not be correct to say we are in a state of defenselessness, because our situation is not determined only by

¹²⁹ *Argentina: From Insolvency to Growth*, [Washington:] The World Bank, 1993, 95.

¹³⁰ "Denuncia de 200 Generales en Retiro," *La Nación On Line*, March 7, 1997, <<http://www.lanacion.com/97/03/07/p03.htm>>, (April 30, 1997).

the level of operational capacity but derives from the sum of political, economic, and – obviously – military powers.”¹³¹

Fabricaciones Militares

On taking office, Menem forced the privatization of state-owned defense industries and the sector has experienced a dramatic wave of down-sizing.¹³² Since the 1940s, the armed forces had run FM, a large and largely inefficient collection of companies. FM made arms, controlled a range of “strategic industries,” and at one time even made refrigerators. It ran up huge losses. By 1980 it was Argentina’s largest conglomerate and lost a reported US \$600 million. During the years of the Proceso, FM alone swallowed about seven percent of the national budget.¹³³ Under governments run by the armed forces or under their strong influence, repeated economic reforms foundered as the military services refused to reform FM.¹³⁴ Now that Menem has dismantled the old system, politicians have voiced serious concern that FM’s demise has devastated the communities where its factories once sustained the local economy. The problem is particularly severe in places such as San Nicolás, once a major steel town in Buenos Aires Province, and in Córdoba Province, where FM was the biggest employer in a number of medium-sized towns.¹³⁵

Air Power and Upgrades

The expense of acquiring, operating, and maintaining a modern air force is a particularly heavy burden for a country that cannot domestically produce a broad range of sophisticated aircraft and avionics. The embargoes on arms sales imposed on Chile and Argentina by many industrialized states while the armed forces ruled both countries hit

¹³¹ “Ocho de cada diez aviones de la Fuerza Aérea no están para volar,” *Diario Popular*, Nov. 12, 1995, *Ser en el 2000 Database*, Oct. 31, 1996, <<http://ser2000.overnet.com.ar>>, (Jan. 8, 1997).

¹³² See “1.100 despidos en Fabricaciones Militares: 400 cesantias en Rio Tercero,” *Intervoz, La Voz del Interior Electrónica*, Dec. 13, 1996, <http://www.intervoz.com.ar/96/12/13/index_01.htm>, (Dec. 13, 1996).

¹³³ Paul H. Lewis, *The Crisis of Argentine Capitalism*, (Chapel Hill, NC: The University of North Carolina Press, 1990), 451, 454.

¹³⁴ Gary W. Wynn, *Argentina: Illusions and Realities*, (New York: Holmes & Meier, 1986), 114.

¹³⁵ “1.100 despidos en Fabricaciones Militares: 400 cesantias en Rio Tercero,” *Intervoz, La Voz del Interior Electrónica*, Dec. 13, 1996, <<http://www.intervoz.com.ar:80/96/12/13/index.com>>, (Dec. 13, 1996).

their air forces harder than the other military services. Cut off from their principal foreign suppliers, their existing assets deteriorated and their maintenance and supply costs increased dramatically. For many years, the embargoes forced the Chilean and Argentine air forces to place short-term readiness above long-term planning. To do so, they often made costly and not always coherent purchases of a wide array of equipment. As “pariah states,” they found it particularly hard to service and maintain their lead fighter and attack aircraft. They sought supplies and training support from other “pariahs,” such as Israel and South Africa, and often succeeded in keeping their aircraft flying. Still, solutions to problems were often less than ideal and maintaining an air force under such conditions did not come cheap.

As the embargoes weakened and as they have dropped away, both governments – having rejoined the international community – are modernizing forces long cut off from the mainstream of the aviation industry. In an era of shrinking defense budgets new aircraft are often out of the question and aging airframes and related equipment have not made it easy to meet these pent-up demands for more modern forces.

Upgrading equipment in inventory, or acquiring used aircraft from abroad, is often the solution. It is cheaper and more practical to replace aging radars and avionics rather than to buy expensive new aircraft.¹³⁶ Repairing an airframe’s weak spots and rebuilding or replacing key systems such as its avionics, armaments, or cockpit are an increasingly effective means of raising an older aircraft’s level of performance.¹³⁷ Both Argentina and Chile have followed this practice in recent years. They have upgraded fourth and fifth generation fighter and attack aircraft, including the Mirage 3, Mirage 5, F-5, and A-4. They are not alone. Over the last decade other governments in the region – including Ecuador, Brazil, and Venezuela – have upgraded the same or similar types of aircraft.

¹³⁶ John J. Fialka, “Fixed-Up Fighters: Old Warplanes Get Brand New Electronics, Live to Fight Again,” *The Wall Street Journal*, Sept. 19, 1991, A1-A8; Glenn W. Goodman, Jr., “The Upgrade Mirage,” *Armed Forces Journal International*, Feb. 1996, 34-39.

¹³⁷ The following discussion of systems often modernized in upgrades draws heavily on Jim Cunningham, “The New Old Threat: Fighter Upgrades and What They Mean for the USAF,” *Airpower Journal Contributor’s Corner*, <<http://www.cdsar.af.mil/cc.html>>, (Jan. 2, 1997).

Only recently, with Peru's MiG-29 purchase, have more advanced aircraft entered the region.

Avionics

In recent decades, avionics systems have improved more markedly than other aircraft systems. New avionics can greatly increase the combat capabilities of an older aircraft by increasing radar range and the ability to distinguish between low-flying aircraft and ground clutter. More powerful computers now give pilots vital information in forms that they can more easily and more rapidly digest.

Cockpit Design

Cockpit improvements include simple standardization, to make maintenance easier and allow pilots to move more easily from one aircraft to another with minimal adjustments. They include improved display technology that keeps a pilot's attention focused on the world outside his aircraft rather than on his cockpit's interior. Hands On Throttle And Stick (HOTAS) upgrades bring most flight controls together in a restricted area to save the pilot the distractions of reaching around his cockpit for controls. Head-Up Display (HUD) upgrades present information about the pilot's aircraft and mission – speed, heading, weapon status, and targeting data – on a piece of glass looking out over the aircraft's nose.

Armament

Today, missiles are more accurate and reliable than in the past. They are a flexible upgrade of capability, because older aircraft can often carry and fire newer missiles with a minimum of difficulty or modification. Thus, although an older aircraft's other systems are less capable, it can potentially carry the same armament as the most modern fighters and attack aircraft. In many situations, although certainly not all, modern armament will dramatically increase an older aircraft's effectiveness.

Chile's Air Force

The Chilean Air Force (FACH), founded in 1930, is one of the world's oldest independent air forces. Over the last decade, it has significantly changed its force structure with new and modernized combat aircraft, an increased transport capacity, and improved command and control.¹³⁸ Like Chile's other armed forces, the FACH emphasizes traditional military roles in defining its missions and doctrine, particularly territorial defense, or "vigilance and positive control of the sovereign air space of Chile."¹³⁹ Because it has deeper pockets than most air forces in the region and an ability to plan a number of years in advance, the FACH is doing more than any South American air force to create an effective, modern, and well-balanced force.

This is a big turnaround for the FACH. During the 1970s and early 1980s Chile's political isolation brought sanctions, sanctions imposed high costs on the Air Force, and readiness declined. British, US, and French embargoes on exporting military equipment to Chile grounded many FACH aircraft.

Memories of the embargo years remain clear in the minds of many members of the Chilean armed forces. Col. Luis Bolton, head of the Chilean Air Force Mission in Washington, DC, was among the last group of Chilean officers to receive flight training in the United States before sanctions took effect. Colleagues scheduled for US training at a later date were out of luck. The FACH had to make other arrangements, sending pilots to Brazil and to Europe for training. Today, as Bolton has observed, officers of that generation are starting to fill senior FACH billets. All recall the difficulties the service had in maintaining and operating equipment during the embargoes.¹⁴⁰ They have committed the FACH to limiting its reliance on any one supplier. The FACH reportedly

¹³⁸ Alfredo Vega, "Preocupación de los mandos aeronáuticos," *La Nación*, June 2, 1995, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar>>, (Jan. 8, 1997).

¹³⁹ Fernando Rojas Vender, "El sistema aeroespacial chileno," *Air Power Journal*, *Air Chronicles International Español*, 1996, <<http://www.cdsar.af.mil/apj-s/chileroy.html>>, (Jan. 2, 1997).

¹⁴⁰ Col. Luis Bolton, Chilean Air Force, interview with author, Washington, DC, Nov. 26, 1996. The Chilean Army is particularly keen to keep a certain distance from the United States in terms of acquisitions. See, "Chile: Army Praises Rejection of Military Pact with US," *La Tercera de la Hora*, July 18, 1996, trans., *Foreign Broadcast Information Service*, July 18, 1996, FBIS-LAT-96-143, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

currently flies aircraft from the United States, France, Spain, Britain, Canada, Japan, and Germany. Israel supplies much of the FACH's armament and has modified many FACH aircraft.¹⁴¹

The British Embargo

Throughout the late 1970s the FACH struggled to maintain its Hawker-Siddley Hunter ground attack aircraft – then the backbone of its fleet – in the face of a British embargo. In 1975, Chilean authorities arrested and tortured Dr. Sheila Cassidy, a British subject, for treating a wounded leader of the Movement of the Revolutionary Left (MIR) guerrilla group. In response to the Cassidy affair the British government recalled its ambassador to Santiago.¹⁴² The break led to a British embargo that prevented the Chileans from purchasing Rolls Royce Avon engines and spares for the Hunters.¹⁴³ The British did not lift the embargo until 1980.

The French Embargo

The French government of President Valéry Giscard d'Estaing sold 16 Mirage 50 to Chile in 1980. The Mirage 50 is an upgraded variant of the Mirage 5 with greatly improved climb rates and greater maneuverability.¹⁴⁴ France's 1981 election of Socialist President François Mitterand brought a French embargo on the heels of the British and US embargoes.

¹⁴¹ "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

¹⁴² Heraldo Muñoz, "Chile's External Relations under the Military Government," 304-322, in Arturo Valenzuela and J. Samuel Valenzuela, *Military Rule in Chile: Dictatorship and Oppositions*, Baltimore, Md.: Johns Hopkins University Press, 1986, at 308.

¹⁴³ Karen L. Remmer, *Military Rule in Latin America*, Boston: Unwin Hyman, 1989, 133.

¹⁴⁴ "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996. A powerful Atar 9K50 engine powers the Mirage 50 and produces almost 15,900 pounds of static thrust as opposed to the roughly 13,700 pounds of the static thrust produced by the Atar 9C in the Mirage 5.

US Sanctions

At the time of the coup, Chile had just ordered 16 Northrop F-5E and F-5F “Tiger” lightweight fighters from the United States. In 1973 these were new aircraft, the latest version of the F-5 “Freedom Fighter” that had entered US Air Force service in 1964. Yet the nature of the Pinochet regime prompted strong protests in the United States. On the floor of the US Senate, Senator Hubert Humphrey asked why the United States should sell arms to what he called “the most totalitarian government in South America.”¹⁴⁵ The first US sanctions against Chile took effect with the Foreign Assistance Act of 1974,¹⁴⁶ but not until 1976 did the US really crack down on arms exports to Chile. The Kennedy Amendment (Section 406) to the International Security Assistance and Arms Export Control Act of 1976 prohibited all security assistance and US arms sales, transfers and deliveries to Chile.¹⁴⁷ The US did not lift the ban until 1981. By the time the bill passed, the F-5s were in Chile, but the amendment cut off new sales of US military equipment to the Pinochet regime – froze service and training – and left the F-5s, like the Hunters, orphaned. US sanctions against Chile did not entirely end until after President Aylwin took office in 1990.

During the embargo years, the Chileans publicly insisted that they could keep most of their F-5s flying, but granted that they could do so only with great difficulty and at great cost. To do so – and to keep other aircraft flying – they often paid top dollar for spare parts on the black market.¹⁴⁸ According to at least one report in the trade press, by the late 1980s the FACH weighed mothballing its F-5 fleet because it had so many difficulties in keeping the aircraft flying.¹⁴⁹

¹⁴⁵ Mary Helen Spooner, *Soldiers in a Narrow Land: The Pinochet Regime in Chile*, (Berkeley & Los Angeles: University of California Press, 1994, 110.

¹⁴⁶ Section 25 of the Foreign Assistance Act of 1974 [P.L. 93-559; 22 USC 2370 note].

¹⁴⁷ Section 406 of the International Security Assistance and Arms Export Control Act of 1976 [P.L. 94-329]; see also, US Library of Congress, Congressional Research Service, *Economic Sanctions Imposed by the United States Against Specific Countries: 1979 Through 1992*, by Erin Day, [Washington] August 10, 1992, CRS Report 92-631F, CRS-459.

¹⁴⁸ Shirley Christian, “San Bernardo Journal: Chileans Try an Air Force Their Way,” *The New York Times*, July 9, 1988, 4.

¹⁴⁹ Ramón López, “Chilean Arms Industry Matures,” *International Defense Review*, Oct. 1988, 1333-1335, at 1335.

ENAEER

One Chilean reaction to the US and European sanctions was to establish the state-owned National Aeronautics Company (ENAEER) in 1984. Unlike similar firms in Argentina and elsewhere in South America, ENAEER never tried to mark out a major place in the sun as an exporter. ENAEER has assembled relatively simple aircraft, such as the Pillán trainer, and has sought and won some export contracts, but its primary mission was and is to service the FACH's wide-range of foreign-built aircraft. Its limited mandate prevented it from ever becoming a major drain on the national budget, although the Chilean government still reportedly passes along subsidies to ENAEER – and the other state-owned defense firms – in every national budget.¹⁵⁰

Since the end of the Cold War, that modest mandate has paid additional dividends. As ENAEER never sought broader markets, it has not had painful cuts forced upon it because of declines in the world arms market. Protected by both their modest scope and political clout of the armed services, Chile's state-owned arms firms have not had to pass through the trauma of restructuring, massive layoffs, and privatization experienced – for example – by Argentina's FM.

F-5 and Mirage 50 Upgrades

Israel Aircraft Industries (IAI) and ENAEER have modernized the FACH's F-5Es, F-5Fs and Mirage 50s. Starting in 1990, IAI developed prototype upgrades for two of the FACH's F-5s and later supplied upgrade kits to ENAEER, which completed the work on the rest of the FACH's 16 aircraft F-5 fleet.¹⁵¹ The F-5 upgrades reportedly cost roughly US \$200 million.¹⁵² The F-5s now include an upgraded avionics suite – including a version of the EL/M2032 fire-control radar from IAI's now defunct Lavi fighter program, and new navigation and attack systems. The EL/M2032 greatly improves the F-5s's air-to-ground capabilities.¹⁵³ Cockpit upgrades reportedly also include Lavi technology, including a new Head-Up Display.¹⁵⁴ Senior Chilean officers have told the

¹⁵⁰ Thomas Scheetz, "The 'Peace Dividend' in Argentina and Chile: An Evaluation of Opportunities for Defense Conversion," Feb. 14, 1996, *Bonn International Center for Conversion*, <<http://bicc.uni-bonn.de/budget/data/argentin/scheetz.html>>, (Jan. 29, 1997).

trade press that they now expect their F-5s and Mirage 50 "Panteras" to remain in service well into the next century.¹⁵⁵

The 16 Mirage 50s upgraded by IAI and ENAER needed more modernization than the F-5s, including a nose job to pack in new radar systems which extended the length of the plane about three feet. The prototype first flew in 1988. The cockpits were reorganized and a Head-Up Display installed. The upgrade improved the Mirage 50s's navigation and weapons delivery systems and gave them in-flight fueling capability, sturdier landing-gear, and fixed canard wings for greatly improved angles-of-attack at low speeds, improved turn rates, and reduced airframe stress.¹⁵⁶

MirSIP/Elkan

In 1994, Chile bought 25 Mirage 5 aircraft from Belgium. Société Anonyme Belge de Constructions Aéronautiques (SABCA), Belgium's leading aeronautics firm, had modernized 20 of the aircraft – which first entered Belgian service in 1970-1971 – under

¹⁵¹ Glenn W. Goodman, "The Upgrade Mirage," *Armed Forces Journal International*, Feb. 1996, 34-39, at 34.

¹⁵² "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

¹⁵³ Michael Dornheim, "Global Defense Cutbacks Stiffen Competition for Upgrading F-5s," *Aviation Week & Space Technology*, July 22, 1991, 56; David M. North, "Aeronautical Engineering: Chilean Air Force Seeks New Multirole Aircraft," *Aviation Week & Space Technology*, April 25, 1994, 45-46, at 46; Ruth Kaminer, "Elta Begins to Go It Alone," *International Defense Review*, Sept. 1994, 87-88, at 87.

¹⁵⁴ David M. North and James T. McKenna, "FIDAE '94: Chilean Airshow Reveals Region's Market Potential," *Aviation Week & Space Technology*, March 28, 1994, 69-71, at 70.

¹⁵⁵ David M. North, "Aeronautical Engineering: Chilean Air Force Seeks New Multirole Aircraft," *Aviation Week & Space Technology*, April 25, 1994, 45-46, at 46; "Israeli F-5 Plus Shown at FIDAE," *Jane's Defence Systems Modernisation*, March/April 1994, 35. The 5th Air Brigade flies the F-5s out of the Cerro Moreno Air Force Base near Antofagasta. It also flies 12 unmodified F-5s recently bought from Honduras. The FACh may upgrade these in the future. See, Adrian J. English, "Chile Seizes the Chance to Modernize," *Jane's International Defence Review*, Oct. 1996, 24-26, at 25.

¹⁵⁶ David M. North, "Aeronautical Engineering: Chilean Air Force Seeks New Multirole Aircraft," *Aviation Week & Space Technology*, April 25, 1994, 45-46, at 46; Alfredo Vega, "Preocupación de los mandos aeronáuticos," *La Nación*, June 2, 1995; Charles Bickers, "Upgrading Air Forces," *Jane's Defence Weekly*, March 2, 1992, 413; "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996. The 4th Air Brigade operates the "Panteras" out of Carlos Ibañez, near Punta Arenas. "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

the Mirage Safety Improvement Program (MirSIP). The FACH will reportedly use the five unmodified aircraft for tactical reconnaissance.¹⁵⁷ Chile received the first MirSIP Mirage in March 1995 and christened them Mirage 5-M Elkan. Elkan means Guardian in Mapuche, the language of Chile's native communities. They replaced Chile's aging fleet of Hunters.¹⁵⁸

Belgium initially opted to upgrade the aircraft in 1989 for service in its own Air Force. Post-Cold War "peace dividend" budget cuts and force reductions – announced in 1993 long after the MirSIP program had begun – put them on the international market. The appearance of the Belgian aircraft on the world market was a stroke of good fortune of the FACH. Not only was the price right – the Belgians reportedly sold the Mirage at a loss – but the Chileans already have a great deal of experience with Mirage aircraft. In addition, the Belgians designed many MirSIP Mirage systems for interoperability with their fleet of F-16s. The FACH has long considered the F-16 a possible next generation aircraft.¹⁵⁹

The Chileans will pay 100 million dollars for the aircraft, with the final payment coming in 2000, according to the Belgian daily *Le Soir*. The Belgians will also support the sale with pilot training and spares.

Belgium invested in the MirSIP upgrades to extend the lives of their Mirage 5s until at least 2010 and make them the rivals of more modern aircraft. SABCA reinforced the airframes, reconfigured and standardized the cockpits, installed advanced navigation and fire-control systems, and – as IAI and ENAER did with the Mirage 50 Panteras – added new canard wings.¹⁶⁰ The MirSIP/Elkan canards are adjustable, as opposed to the fixed

¹⁵⁷ "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

¹⁵⁸ "Chile Acquires Mirage Jets," *Chip News: Chile Information Project*, March 20, 1995, <<http://www.chip.cl/chips/1995/03/20/5.html>> (Dec. 9, 1996).

¹⁵⁹ Ian Bustin, "Belgian Air Force Mirage 5 Upgrade Programme," *Military Technology*, Vol. 16, No. 2, June 1992, 95-96.

¹⁶⁰ "Leo Delcroix confirme que la défense chilienne s'intéresse aux Mirage 5," *Le Soir*, March 9, 1994, 4; Pierre Bary, "Armement Mirages Belges aux Cocardes du Chili," *Le Soir, Supplément économique Eco-Soir*, Sept. 9, 1994, 10.

canards on the Pantera aircraft, giving the MirSIP/Elkan even better handling characteristics. Before the aircraft left Belgium, SABCA retooled the radio navigation system to meet FACH requirements.¹⁶¹ On receiving the first of the aircraft, FACH Commander-in-Chief Ramón Vega said publicly that they would be on par with Peru's air fleet.¹⁶²

The Future

The FACH is now looking to replace its fleet of T-37B/C advanced trainers and A-37B Dragonfly ground attack aircraft, perhaps as early as late 1998. The FACH bought the trainers and the Dragonflies starting in 1963 as part of the foreign military sales package that included the F-5E and F-5F fighters.¹⁶³

¹⁶¹ Philip Finnegan, "Chile Uses Gulf War Lessons to Map Military Upgrades," *Defense News*, April 1-7, 1996, 23.

¹⁶² "Chile Acquires Mirage Jets," *Chip News: Chile Information Project*, March 20, 1995, <<http://www.chip.cl/chips/1995/03/20/5.html>> (Dec. 9, 1996). Most of the Mirage Elkan will fly out of Antofagasta's Cerro Moreno Air Base as the 5th Air Brigade's 8th Squadron. See, "Chile Buys Mirage Jets," *Chip News: Chile Information Project*, July 20, 1994, <<http://www.chip.cl/chips/1994/07/20/5.html>> (Dec. 9, 1996).

¹⁶³ The 4th Air Brigade flies the Dragonflies out of the Carlos Ibañez Air Force Base. The 3rd Air Brigade – based in Maquehue – also flies the A-37.

Raytheon has announced that the FACH has signed a letter of intent to buy 16 to 25 T-6A aircraft. These will replace the T-37s. The T-6A won the US Department of Defense Joint Primary Aircraft Training System (JPATS) competition. Chile would be the first foreign customer for the aircraft.¹⁶⁴

The FACH placed a March 31, 1997, deadline on submissions of technical data by firms wishing to enter the competition to replace the Dragonflies. This served as a proximate cause for a US government reassessment of its policy of restraint in selling advanced military equipment in South America. Among the aircraft the Chileans have said they are considering as a replacement for the Dragonflies are France's Mirage 2000-5, Sweden's JAS-39 Gripen, and perhaps the F-16. It has also reportedly considered the F/A-18 and the F-15.

The competition for the sale, estimated at roughly US \$1billion, has been intense. Saab, for example, has opened a sales office in Santiago and is marketing the Gripen as a "high-tech, low-cost alternative to the F-16." The Swedes have emphasized that their Air Force and the FACH have similar missions and their aircraft's expected reliability and maintainability.¹⁶⁵ Members of the US Congress who support an F-16 sale to Chile visited Santiago in early 1997.

Lockheed Martin, maker of the F-16; McDonnell Douglas, maker of the F/A-18; and Saab all asked the US government to allow them to provide technical data on their aircraft to the FACH. Saab had to do so because the Gripen contains many US-made components.¹⁶⁶ In July 1996, General Máximo Venegas Fuentes of the FACH told the Chilean press that, "the fighter replacing the A-37 must have at least the technology we already have in our F-5, Pantera, or Elkan," including, presumably in-flight refueling

¹⁶⁴ David A. Fulgham, "Chile Agrees to First Foreign T-6A JPATS Sale," *Aviation Week & Space Technology*, Jan. 13, 1997.

¹⁶⁵ Mark Lorell, Daniel P. Raymer, Michael Kennedy, and Hugh Levauz, *The Gray Threat: Assessing the Next-Generation European Fighters*, Santa Monica, CA: Rand, 1995, 62.

¹⁶⁶ "Peruvian MiG Buy May Drive US Policy," *Arms Trade News*, Dec. 1996/Jan. 1997, <<http://www.clw.org/pub/clw/cat/atn0197.html>>, (Feb. 10, 1997).

capability. He added that Chile would only consider the C or D models of the F-16, as the FACH considers them the true counterparts of the Gripen and the Mirage 2000-5. The FACH, he said, would not consider buying A or B models of the F-16. They will not meet FACH requirements due to limited expected lifespan, high operational and maintenance costs, and because aircraft with more advanced technology are available on the world market, he said.¹⁶⁷

Defense Minister Edmundo Pérez Yoma had said publicly that Chile will replace the A-37s regardless of whether the US is selling. "We are buying, and we are buying from whoever sells."¹⁶⁸ Indeed, the Chilean government made a particular point of not asking the US government to revise its arms sale policies to the region on Chile's behalf. "Chile is not pushing for the review of the United States policy on arms sales to Latin America," Chilean Ambassador to Washington John Biehl wrote in *The New York Times*. Neither the Chilean government nor the FACH appeared interested in coming hat-in-hand to Washington. "Chile has purchased the arms required for its defense only from those countries that can legally and reliably provide them," Biehl wrote.¹⁶⁹

After having earlier given Saab the go-ahead, in late March the US government allowed Lockheed Martin and McDonnell Douglas to provide technical marketing data to the Chilean government on their aircraft. FACH commander Rojas Vender called the US decision "a very important step," and Chilean political leaders praised the move.¹⁷⁰ The White House later said that the US government was continuing to review its arms export policy to Latin America and whether or not it would ultimately allow exports of advanced US fighters to the region. Recognizing the Chilean deadline, it gave the green

¹⁶⁷ "Chile: Acting Air Force Chief Evaluates Fighter Purchase," *El Mercurio*, July 23, 1996, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-143, <<http://fbis.fedworld.gov>>, (Jan. 24, 1997).

¹⁶⁸ Gabriel Escobar, "A Nod to Civilian Ascendancy," *The Washington Post*, Oct. 14, 1996, A23.

¹⁶⁹ John Biehl, "Letter to the Editor," *The New York Times*, Jan. 27, 1997, A16.

¹⁷⁰ "Chile: Air Force Expresses Satisfaction Over F-16 Offer," *El Mercurio*, April 4, 1997, *Foreign Broadcast Information Service*, April 7, 1997, FBIS-LAT-97-097, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (April 28, 1997).

light to the US aeronautical firms in order to avoid any disadvantage to them should US policy ultimately change.¹⁷¹

In the region, however, governments saw the Clinton administration's decision to allow Lockheed to submit a technical data to Chile as the end of a US ban on high-technology arms sales to Latin America. No one in Washington was contradicting them: "It is very rare for the government to release this data and then not allow the sale to go through," a Clinton administration official told *The New York Times*.¹⁷²

While never questioning Chile's right to arm itself as it sees fit, Argentina has quietly opposed US proposals to completely lift the arms sales restrictions because, simply put, it hasn't the money to invest in sophisticated arms.¹⁷³

Chile's Cóndor AEW System

Chile's exceptional geography gives its military planners particular concerns. Its frontier with Argentina runs for 5,150 kilometers, its frontiers with Bolivia and Peru another 1021 kilometers. Yet at Chile's widest point, the distance from the Eastern border to the sea is barely 200 kilometers. Chilean preoccupation with these facts accounts for much of the tenor of the national debate on defense policy. A desire to avoid strategic surprise has surely motivated FACH investments in early warning systems and in-flight refueling, which gives FACH tactical aircraft greatly increased range.¹⁷⁴

IAI's Elta Electronics subsidiary has installed its Phalcon airborne early warning (AEW) radar into a modified Boeing 707 airframe and has sold the system to the FACH. The

¹⁷¹ "Press Briefing by Deputy Press Secretary David Johnson, Robert Bell, Senior Director For Defense Policy and Arms Control at The NSC, and Undersecretary of Commerce William Reinsch," The White House, Office of the Press Secretary, April 4, 1997; Stacey Evers, "USA Amends Policy for Chile's Fighter Deadline," *Jane's Defence Weekly*, April 16, 1997, 8.

¹⁷² Calvin Sims, "Latins See Dickering on Sale of Jets to Chile as End of US Ban," *The New York Times*, April 7, 1997, <<http://www.nytimes.com/yr/mo/day/news/world/armrace-us-latam.html>>, (April 7, 1997).

¹⁷³ Marina Aizen, "Defensa: Preocupa la venta de armas a Latinoamérica," *Clarín Digital*, Jan. 19, 1997, <<http://www.clarin.com/diario/97-01-19/t-01201d.htm>>, (Jan. 20, 1997).

¹⁷⁴ Marcela Rosana Donadio and Luis Tibiletti, "El concepto de balance estratégico y la seguridad regional en el Cono Sur," *Balance estratégico y medidas de confianza mutua*, Santiago: FLACSO, 1995, 157-190, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar/Archivo/d000cb2c.htm>>, (Jan. 31, 1997).

Chileans have given the system the name "Cóndor." Press reports estimate the cost at to the FACH of US \$150 million.¹⁷⁵ It is South America's first AEW aircraft. The Phalcon/Cóndor is capable of tactical surveillance, command and control and signals intelligence roles in addition to the core AEW task. It greatly improves Chile's fighter control capability.¹⁷⁶ The FACH can now give its pilots a situational awareness of the battle space unmatched by neighboring air forces.

IAI has also converting a FACH Boeing 707-300B into an "Aguila-class" air-refueling tanker.¹⁷⁷ The tanker will have two wingtip refueling pods. The FACH is reportedly considering having IAI convert two C-130 Hercules transports into tankers.¹⁷⁸

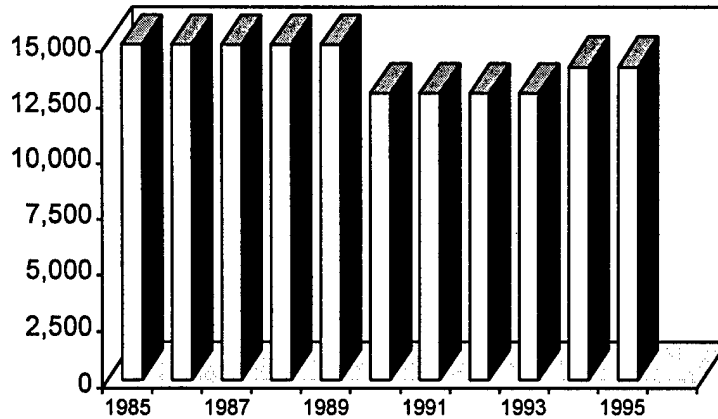
¹⁷⁵ "Chile Refuses Israeli AEW Delivery," *Jane's Defence Weekly*, March 25, 1995, 17; "Un avión espía para Chile," *Clarín*, June 1, 1995, *Ser en el 2000 Database*, Dec. 15, 1996, <<http://ser2000.overnet.com.ar>>, (Jan. 7, 1997). IAI reportedly took a heavy loss on the Phalcon/Cóndor deal of approximately US \$30 million. See, Amnon Barzilay, "Israel: IAI Efforts Toward Global Market Discussed," *Ha'aretz*, April 1, 1997, *Foreign Broadcast Information Service*, FBIS-NES-97-069, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (April 28, 1997).

¹⁷⁶ Martin Streetly, "International Report: Phalcon Debut," *Journal of Electronic Defense*, Aug. 1993, 21.

¹⁷⁷ Philip Finnegan, "Chile Uses Gulf War Lessons to Map Military Upgrades," *Defense News*, April 1-7, 1996, 23; "Chile: Ministers, Lawmakers Hail Civilian-Military Relations," *El Mercurio*, Sept. 20, 1996, *Foreign Broadcast Information Service*, Sept. 20, 1996, FBIS-LAT-96-187, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

¹⁷⁸ "Chile/Air Force/Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Chile/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996. The FACH will station these resources in Santiago with the 2nd Air Brigade. Despite public assurances from Argentine officials that this new capability causes no undue concern in Buenos Aires, the combination of these systems gives the FACH the ability to project force deep into the territories of its neighbors. See, Marcela Rosana Donadio and Luis Tibiletti, "El concepto de balance estratégico y la seguridad regional en el Cono Sur," *Balance estratégico y medidas de confianza mutua*, Santiago: FLACSO, 1995, 157-190, *Ser en el 2000 Database*, <<http://ser2000.overnet.com.ar/Archivo/d000cb2c.htm>>, (Jan. 31, 1997).

Figure 6: Chilean Air Force Personnel, 1985 to 1995, in thousands



Source: *The Military Balance*, Various Years

Personnel

FACH training standards are high. US pilots who have participated in exercises with their FACH counterparts recognize their skill and professionalism and admire their aggressive flying. Budgets have fallen since the return of democracy. In consequence, the FACH has declined somewhat in size, but not substantially, as Figure 6 indicates. While calls for ending mandatory military service have increased, the FACH still takes in 1,500 conscripts annually.¹⁷⁹ The earmarking of reserved copper funds for acquisitions allows the FACH to devote a larger proportion of its budgeted funds to maintaining its personnel structure. Still, military salaries have begun to stagnate and Chile's growing economy is luring trained personnel – including pilots – to the private sector. In 1995, former FACH Commander-in-Chief Fernando Rojas told the Chilean press FACH salaries lagged 20 to 30 percent behind salaries in the private sector and that 10 percent of his force's pilots had left to take private sector jobs.¹⁸⁰

¹⁷⁹ "Military Service to Undergo Transformations," *Chip News: Chile Information Project*, Sept. 6, 1996, <<http://www.chip.cl/chips/1996/09/06/1.html>>, (Dec. 6, 1996); Calvin Sims, "Killing Casts Focus on Abuse in Chilean Military," *The New York Times*, April 16, 1997, A8.

¹⁸⁰ "Military Pilots Fly Off to Private Sector," *Chip News: Chile Information Project*, Aug. 8, 1995, <<http://www.chip.cl/chips/1995/08/08/4.html>>, (Dec. 9, 1996).

Argentina's Air Force

The FAA became an independent service in 1945. From its foundation Argentina was – along with Brazil – the premier air power in South America. In the late 1940s, the FAA flew 100 British-built Gloster Meteor Mk-4 jets and 45 Avro Lincoln and Lancaster bombers, a formidable force on any continent.¹⁸¹ But today, the FAA is a shadow of its former self. It has yet to fully recover from the embargoes of the 1970s and 1980s, from losses suffered in Falkland/Malvinas war, or from more than a decade of tight budgets.

In Argentina as in Chile the military focuses on territorial defense. The Argentine government has defined the duties of its armed forces as the preservation “of the nation’s sovereignty and independence, territorial integrity, self-determination, the life and liberty of its inhabitants, and [preservation of] its resources.”¹⁸² Brigadier General Rubén Montenegro, current FAA Chief of Staff, has identified his service’s primary responsibility within that broad mandate as “the protection and control of our airspace.”¹⁸³ President Menem has also tasked his armed services with broad international peacekeeping duties since the early 1990s.

The FACH’s reserved acquisition funds – along with sound planning and good financial management – have allowed it to conduct a broad renovation of its fleet. The FAA’s ability to modernize has been far more limited. Still, one major FAA upgrade effort is underway. In 1995, Argentina acquired 36 A-4M Skyhawk fighter-bombers from the United States under the US Foreign Military Sales program. Lockheed Martin is upgrading the aircraft, which will enter into service in 1997 and 1998. Details of this program are discussed below. No other major tactical aircraft initiatives are on the horizon. The aviation trade press has reported that the FAA is also looking to upgrade its Mirage 3 and 5 fighters, Dagger Neshar fighters, T-34A trainers, and C-130

¹⁸¹ José C. D’Odorico, “La Fuerza Aérea Argentina,” *Air University Review*, July-August 1986, 97-105, at 99-100.

¹⁸² *Defensa Nacional*, Presidential Decree No. 1116/1996, Oct. 2, 1996.

¹⁸³ “Argentina: Air Force Chief of Staff on Budget Cuts,” *La Nación*, Oct. 26, 1996, *Foreign Broadcast Information Service*, FBIS-LAT-96-216, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 10, 1997).

transports, but the service's current financial situation has made funding the Skyhawk modernization a challenge and does not allow work to begin on these projects.¹⁸⁴

Embargoes

In recent decades the FAA has flown a wide range of aircraft. Like the Chileans, the Argentines faced embargoes and related restrictions in the 1970s and early 1980s. During those years they maintained what they had and bought what they could. In the United States, the administration of President Jimmy Carter began imposing restrictions in early 1977.¹⁸⁵ By 1978, the Carter administration had suspended all US arms sales and military assistance to Argentina to protest Proceso government human rights violations.

Although Ronald Reagan's administration began to ease these restrictions in 1981 – citing Argentina's role in "the hemispheric defense against outside subversion,"¹⁸⁶ the US imposed them again with the outbreak of the Falkland/Malvinas war.

As was noted earlier, Britain, once a major supplier of arms to Argentina and its Air Force, imposed a ban on arms sales when the war broke out in 1982. That ban remains in place. The rest of the European Community also halted arms sales to Argentina during the war, although when the war ended France resumed arms sales almost immediately. These various bans have left the FAA with an inventory of aircraft that reflects Argentina's changing political fortunes over the last few decades. The FAA flies US-built A-4P attack aircraft purchased in the 1960s. It has French Mirage 3 and Mirage 5 fighters acquired in the early 1970s and Israeli Dagger Nesher fighters bought in 1976 as tensions with Chile rose over the Beagle Channel dispute. It also flies domestically-built IA-58 Pucará and IA-63 Pampa aircraft.

¹⁸⁴ "Military Affairs: Argentina," *Air International*, Nov. 1996, 259. The FAA has bought eight Su-29 trainers from Sukhoi of Russia for roughly US \$5 million. They will carry a mix of Russian, Swiss, German, and US equipment. See, "Russia: Moscow to Deliver Su-29 Planes in May," *Interfax*, April 17, 1997, *Foreign Broadcast Information Service*, April 18, 1997, FBIS-UMA-97-107, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (April 28, 1997).

¹⁸⁵ US Library of Congress, Congressional Research Service, *Economic Sanctions Imposed by the United States Against Specific Countries: 1979 Through 1992*, by Erin Day, [Washington] Aug. 10, 1992, CRS Report 92-631 F, 433.

¹⁸⁶ James Nelson Goodsell, "US Policy Tilts Toward Selling Arms to Argentina," *The Christian Science Monitor*, March 19, 1981, 5.

The Falkland/Malvinas War

The FAA acquitted itself well in the Falkland/Malvinas war, consistently penetrating British air defenses, sinking five British ships, and hitting 20 more. But of Argentina's three services, it suffered the most serious material losses during war. At the start of the conflict, the FAA and Argentine Naval Aviation could bring to the battle 44 Mirage 3 and Mirage 5 fighters, 68 A-4 fighter-bombers, 8 to 10 Canberra bombers, 5 Super Etendard naval attack aircraft, and about 60 IA-58 Pucará ground-attack aircraft. By war's end, the FAA alone had lost more than 100 aircraft – including 22 helicopters – an estimated 44 percent of its operational strength.¹⁸⁷ The British shot down 5 A-4s and perhaps as many as 19 Mirages and Dagger Neshers in air-to-air combat. They downed many other Argentine aircraft with small arms fire, missiles fired from British warships, or land-based Rapier or Blowpipe surface-to-air missiles.¹⁸⁸ More aircraft were destroyed or captured on the ground.

Post-War Downsizing

The FAA tried to make good its losses after the war, acquiring additional Mirage 5Ps from Peru and additional Dagger Neshers from Israel in 1983, but international sanctions, Alfonsín's defense cuts, and the economic downturn of the mid-1980s assured that any re-arming would be unbalanced and incomplete. Since the mid-1980s, although international restrictions have eased, domestic austerity has intensified. The FAA has suffered from years of little investment in equipment and training. In 1989, the FAA had a budget of US \$220 million. In 1996, it had a budget of only US \$70 million.¹⁸⁹ As with

¹⁸⁷ Robert W. Duffner, "Conflict in the South Atlantic: The Impact of Air Power," *Air University Review*, March-April 1984, 79-87, at 80; Adrian J. English, "Argentina – The Rise and Fall of a Regional Superpower," *Jane's Intelligence Review*, Oct. 1992, 474-478, 477; "Argentina Restocks Arsenal With Tip-Top Fighters, Missiles," *The Christian Science Monitor*, Jan. 12, 1983, 4.

¹⁸⁸ Robert W. Duffner, "Conflict in the South Atlantic: The Impact of Air Power," *Air University Review*, March-April 1984, 79-87, at 85; "Argentina, Air Force, Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Argentina/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

¹⁸⁹ Ariel Palacios, "Militares Argentinos podem tirar 'férias coletivas'," *O Estado de S. Paulo*, Sept. 18, 1996, <<http://www.estado.com.br/jornal/96/09/18/ARTEL18.htm>>, (Feb. 4, 1997).

the other services, the 1997 FAA budget will fall a reported four percent below the 1996 level.¹⁹⁰

Personnel

In response to these tough economic times, the FAA has retrenched, but not really restructured itself. Hopes that hard times would pass, a lack of current funds to “buy out” service members with early retirement packages, and an understandable reluctance to lose skilled professionals have left the service top-heavy, but particularly thick around the middle. As Figure 7 shows, while the FAA is smaller than 15 years ago, most of the decline has come at the enlisted level and is the result of both sharp budget cuts and the abolition of conscription. The number of officers and non-commissioned officers has remained nearly constant. Over 8,400 enlisted men served in the FAA in 1983. Less than a thousand did in 1996. In contrast, slightly more than 2,500 officers served in FAA in 1983 as opposed to just over 2,300 in 1996.

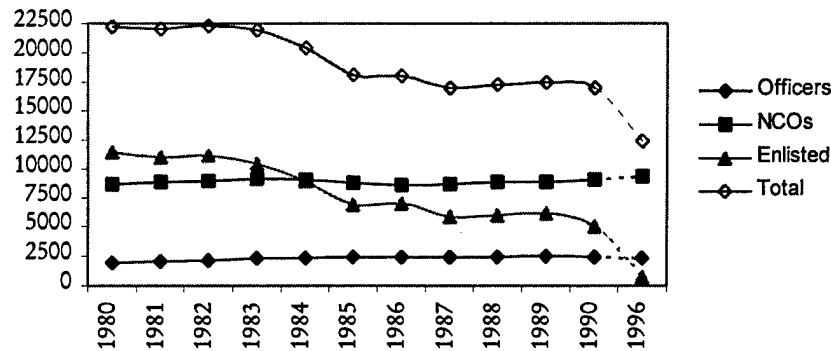
o

The FAA is the leanest of Argentina's three services, but like the Army and the Navy it is burdened by high personnel costs, which in 1996 accounted for over 75 percent of the FAA budget, or slightly less than 468.5 million Argentine pesos. These high fixed costs take on an added importance when seen in light of the latest austerity measures to hit the Argentine Defense Ministry. The 1997 budget's four percent reduction will hit operations and maintenance and capital expenditures. The FAA already budgeted less than 32 million pesos on capital expenditures for 1996.¹⁹¹

¹⁹⁰ Alfredo Vega, “Tenemos equilibrio con Chile,” *La Nación*, Nov. 3, 1996, *Ser en el 2000 Database*, Nov. 8, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cbd6.htm>>, (Feb 10, 1997).

¹⁹¹ Briefing Memoranda, Department of Financial Resources, Budget Planning and Programming Division, Joint Chiefs of Staff, Argentine Ministry of Defense, 1996. In early 1997, the Argentine peso traded at one peso to the US dollar.

Figure 7: Argentine Air Force Personnel, 1980 to 1990, and 1996



Source: Department of Human Resources, Argentine Ministry of Defense

Pilots

As shown in Table 1, so long as the budget shrinks but the force is not restructured personnel expenses crowd out capital expenditures and operations. Already in 1990, an earlier FAA commander publicly lamented that budget shortfalls had forced cutbacks in the training of combat pilots.¹⁹² The situation has not improved in the years since. By early 1996, cutbacks on flying hours meant that only half of FAA pilots were reportedly flight qualified, as compared to 95 percent two years before.¹⁹³ According to press reports, while the FAA had 800 flight-qualified pilots in 1982 it had only 300 in 1996.¹⁹⁴ “Perhaps we will have to slightly reduce the number of pilots who fly,” the FAA Chief-of-Staff, Brigadier General Rubén Montenegro, told the Argentine press in late 1996, “but under no circumstances will we reduce the number of flight hours of those pilots who

¹⁹² Julio C. Carasales, *National Security Concepts of States: Argentina*, New York: United Nations Institute for Disarmament Research, 1992, 28.

¹⁹³ Calvin Sims, “Argentine Military for Rent; Turns Swords Into Tin Cups,” *The New York Times*, Jan. 29, 1996, A1-A9.

¹⁹⁴ Alfredo Vega, “Las empresas pagan más por los tecnicos militares,” *La Nación On Line*, Sept. 22, 1996, <<http://www.lanacion.com.ar/996/09/22/p04.htm>>, (Feb. 15, 1997).

remain on flight status.”¹⁹⁵ According to press reports, the FAA estimates that a fully-qualified pilot should fly a minimum of 140 hours annually. Officially, FAA pilots fly around ten hours a month, or 120 hours a year. Yet given holidays, maintenance problems, and lack of funds many of them are probably only flying 70 to 80 hours annually. In 1982 the FAA flew 120,000 hours annually. In 1996 the FAA flew a reported 42,000 hours while the FACH flew 130,000 hours and the Brazilian Air Force flew 145,000 hours.¹⁹⁶ The FAA is also losing pilots to the private sector as opportunities in the Southern Cone’s commercial aviation market expand. In the first nine months of 1996, 78 pilots reportedly abandoned the FAA for the private sector.¹⁹⁷

Restricted Maintenance

The FAA air fleet has also deteriorated significantly. According to National Deputy Miguel Ángel Toma, President of the Defense Commission in Argentina’s Chamber of Deputies, by late 1995 less than twenty percent of FAA aircraft were operable. Even fewer operated at full capacity.¹⁹⁸ One early 1996 press report said that only 30 tactical aircraft remained in service.¹⁹⁹ In 1996, Brigadier General Juan Paulik, then the FAA’s Chief-of-Staff, said that his service was handling the budget cuts by narrowing its horizons: “We conduct restricted maintenance of material and selective training of personnel.”²⁰⁰ His successor, Brigadier General Montenegro, has set similarly modest short-term goals for the FAA: “Our principal goal is to degrade neither our capacity to

¹⁹⁵ Alfredo Vega, “Tenemos equilibrio con Chile,” *La Nación*, Nov. 3, 1996, *Ser en el 2000 Database*, Nov. 8, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cbd6.htm>>, (Feb 10, 1997).

¹⁹⁶ Alfredo Vega, “Las empresas pagan más por los tecnicos militares,” *La Nación On Line*, Sept. 22, 1996, <<http://www.lanacion.com.ar/996/09/22/p04.htm>>, (Feb. 15, 1997); Lt. David M. Mazurowski, USAF, <dmazurow@san.okc.disa.mil> “Flying Hours,” Jan. 23, 1997, personal message to the author, (Jan. 23, 1997).

¹⁹⁷ Ariel Palacios, “Militares Argentinos podem tirar ‘férias coletivas’,” *O Estado de S. Paulo*, Sept. 18, 1996, <<http://www.estado.com.br/jornal/96/09/18/ARTEL18.htm>>, (Feb. 4, 1997).

¹⁹⁸ “Menos del 20% de los aviones puede operar,” *Crónica*, Nov. 21, 1995, *Ser en el 2000 Database*, Oct. 31, 1996, <<http://ser2000.overnet.ar>>, (Jan. 6, 1997).

¹⁹⁹ Juan María Coria, “Argentina: Limited Capability of Armed Forces Seen,” *La Prensa*, March 18, 1996, *Foreign Broadcast Information Service*, March 18, 1996, FBIS-LAT-96-062, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

²⁰⁰ “La Fuerza Aérea, con reforma,” *Diario Popular*, Oct. 8, 1996, *Ser en el 2000 Database*, Oct. 31, 1996, <<http://ser2000.overnet.ar>>, (Jan. 6, 1997).

maintain our aircraft nor the training levels of our pilots, for in either case a lack of flight security would result.”²⁰¹

Accidents

In an October 1996 report, the Union for a New Majority Studies Center, a Buenos Aires think-tank, found that between 1986 and 1996 the Argentine press had reported at least 44 accidents involving Argentine military aircraft, including five in the first ten months of 1996. In most cases the report attributed the accidents to a “lack of aircraft maintenance, the deterioration of equipment, and a decline in the training of pilots due to the reduction of flying hours.”²⁰² Shortly after publication of the report, an FAA Boeing 707 flying from Puerto Montt, Chile, to Buenos Aires’s Ezeiza Airport crashed short of the Ezeiza runway, killing two crew members. The aircraft was carrying 25 to 33 tons of frozen fish. Like Argentina’s other armed services, the FAA contracts out services and facilities to the private sector to earn income to supplement its shrinking budget.²⁰³

The A-4

In the midst of these difficulties, the FAA is upgrading the A-4M Skyhawks acquired from the United States. This is one of the aspects of the FAA’s “Schematic Restructuring Plan 2000” (Plan Esquemático Reestructuración Fuerza Aérea 2000 – PERFA 2000) to survive the budget ax. As originally conceived, PERFA 2000 aimed to replace a range of old aircraft with poor maintenance records with a leaner, more rationally organized force. These new A-4Ms will form a part of Argentina’s air defenses well into the next century. Their acquisition also served important political purposes. According to the US Department of Commerce, this one sale is a one hundred percent increase over all US

²⁰¹ Alfredo Vega, “Tenemos equilibrio con Chile,” *La Nación*, Nov. 3, 1996, *Ser en el 2000 Database*, Nov. 8, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cbd6.htm>>, (Feb 10, 1997).

²⁰² “Estadísticas de accidentes en las Fuerzas Armadas,” *La Nación*, Oct. 13, 1996, *Ser en el 2000 Database*, Nov. 8, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cbdb.htm>>, (Feb. 10, 1997).

²⁰³ Roberto Solans, “El Boeing militar cayó por error,” *La Nación On Line*, Dec. 30, 1996, <<http://www.lanacion.com.ar/96/12/30/g08.htm>>, (Feb. 11, 1997).

defense sales to Argentina from 1950 to 1982.²⁰⁴ It symbolizes the Menem administration's commitment to close political relations with the United States. It helped Menem break down barriers to Argentina's return to the international community left over as legacies of the war.²⁰⁵

As was already noted, the FAA and Argentina's Navy have flown earlier versions of the A-4. The FAA acquired 25 A-4P in 1966, 25 more in 1969, and the Navy received 16 A-4Q in 1971. They were among the mainstays of the Argentine Falkland/Malvinas war effort. Flying at the limits of their operational range, and out-gunned by the AIM-9L Sidewinder missiles carried aboard Britain's Harriers, many were lost during the course of the fighting.²⁰⁶ By the early 1990s wartime losses and the wear-and-tear of over twenty years of service had left the FAA with 29 A-4P aircraft. Maintenance problems and lack of essential spare parts kept many of these aircraft grounded. The Navy has lost or withdrawn from service all its A-4Q.

Argentina's A-4P and A-4Q were refurbished A-4B aircraft of a type first flown in 1956. The A-4M is newer. It first flew in April 1970. It carries heavier armor than the A-4P and A-4Q and – although still subsonic – its Pratt & Whitney J52-P-408 turbojet engine develops 11,200 pounds of static thrust—as opposed to the roughly 8,500 pounds of static thrust produced by the engines in the older aircraft. The A-4M can carry roughly 10,000 pounds of weaponry, twice the capacity of Argentina's older aircraft.²⁰⁷

²⁰⁴ "Argentina," *Western Hemisphere Diversification and Defense Market Assessment: A Comprehensive Guide for Entry into Overseas Markets*, [Washington:] US Department of Commerce, Bureau of Export Administration, Office of Strategic Industries and Economic Security, 1996, 27.

²⁰⁵ The A-4, developed for daylight nuclear strikes from US aircraft carriers, is known as a durable aircraft with good handling characteristics. Significant modifications over the years have remade the A-4 into a light attack aircraft for conventional strike and close air support missions. It first flew in June 1954. McDonnell Douglas built almost 3,000 A-4s between 1956 and 1979. See, "Argentina, Air Force, Organization/Order of Battle," Dec. 4, 1995, <Nations/South America/Argentina/Air Force/Organization/Order of Battle>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

²⁰⁶ "AIM-9 Sidewinder" March 4, 1996, <USA/Missiles/Rockets/Anti-Air>, US Naval Institute Military Database, Rockville, MD: United Communications Group, Aug. 5, 1996.

²⁰⁷ "Argentina Buys A-4Ms," *Jane's Defence Systems Modernisation*, March/April 1994, 36.

Lockheed Martin and Upgrades

In 1995, Lockheed Martin Air Services (LAS) won a three-year US \$279.5 million contract to refurbish the A4-M, which the Argentines will call the A4-RA (Argentino). The FAA expects that the first six to eight A4-RA will enter service in the second or third quarter of 1997 and be stationed at Villa Reynolds, in the Province of San Luis. The rest will enter service in 1997 and 1998. In late 1996, Argentina received eight more A-4Ms from the United States as excess US military equipment and will use these aircraft as spares.²⁰⁸

Brigadier General Montenegro has said that "...although we are dealing with old aircraft ... the technology and incorporated avionics are similar to those contained in the latest generation aircraft. The pilots who train in these aircraft can move on – without problems – to an aircraft with the latest technology."²⁰⁹

A modified Northrop Grumman AN/APG-66 pulse-Doppler radar, particularly effective in distinguishing between genuine aircraft and ground clutter, is being installed in the Argentine Skyhawks.²¹⁰ The APG-66 is the radar used in the F-16A/B. Later models of the F-16 carry the more advanced APG-68 radar. For technical and political reasons, the version of the APG-66 Argentina is buying – the ARG-1 – will be less capable than the version installed in the F-16A/B. First, the A-4M's nose is smaller than the F-16's and can only accommodate a smaller and less sensitive antenna. Second, the ARG-1 will be less capable in order to satisfy British security concerns.²¹¹

Still, the system is a step-up from what the US government initially approved for export to Argentina. It won approval in Washington because Argentina has adopted progressive international security policies. For the Bush administration the turning point was

²⁰⁸ Daniel Casas, "Reestructuración y valor," *Página/12*, Nov. 15, 1996, *Ser en el 2000 Database*, Nov. 20, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cc3c.htm>>, (Feb. 10, 1997).

²⁰⁹ Alfredo Vega, "Tenemos equilibrio con Chile," *La Nación*, Nov. 3, 1996, *Ser en el 2000 Database*, Nov. 8, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cbd6.htm>>, (Feb 10, 1997).

²¹⁰ Barbara Starr, "Argentine-bound A-4s May Have F-16 Radars," *Jane's Defence Weekly*, Feb. 19, 1994, 5.

²¹¹ "Argentina: Lockheed Martin Begins A-4M Upgrade," *Jane's Defence Systems Modernization*, July 1995, 6.

probably the Argentine commitment of forces to Desert Shield and Desert Storm. Argentina was the only Latin American country to send troops. At the time the US government announced the radar sale, US Embassy officials in Buenos Aires confirmed that Argentine participation in peacekeeping and its commitment to regional arms control initiatives contributed to the US decision to authorize the sale.²¹²

Allied Signal is installing color LED displays. Lockheed Martin Aircraft Services is doing the design engineering, integration and flight testing of the new systems.²¹³ LAS and its subcontractors will also rewire the aircraft, refurbish their engines, provide needed spare parts, and train pilots and mechanics.²¹⁴

The A-4M Argentino should perform well as a trainer and peacetime patrol aircraft. As a war-fighting platform it is highly vulnerable due to its inability to "see" beyond the horizon, its slow top speed, and its inability to fly at high altitudes when carrying any substantial load of armaments.

Córdoba

Eighteen of Argentina's A-4Ms are being modernized at Lockheed's "Skunk Works" facility in Ontario, California. Lockheed Martin Aircraft Argentina, SA (LAASA), will modernize eighteen more in Córdoba, Argentina. LAASA is a Lockheed subsidiary operating in a state-owned facility, the Area Material Córdoba (AMC), transferred to Lockheed on a long-term lease.

AMC was once the home of Argentina's Fábrica Militar de Aviones (FMA), a company which built its own jet prototypes in the late 1940s and developed the IA-58 Pucará and the IA-63 Pampa in the 1960s and 1970s. The US \$200 million privatization contract –

²¹² Antonio Pala, "The Increased Role of Latin American Armed Forces in UN Peacekeeping: opportunities and Challenges," *Air Power Journal*, Special Edition, 1995, 17-28; Ovidio Bellando, "EE.UU. venderá los aviones con radares," *La Nación*, Feb. 2, 1994, 5.

²¹³ "Argentina, Lockheed Martin Agree on July 1 Privatization," Lockheed Martin press release, 1995, <<http://www.lmco.com/press-releases/pr061395b.html>>, (Dec. 8, 1996); "Argentina: Lockheed Martin Begins A-4M Upgrade," *Jane's Defence Systems Modernisation*, July 1995, 6.

²¹⁴ "Argentina: Skyhawk Upgrade," *Jane's Defence Weekly*, Jan. 7, 1995, 6.

reputedly the largest ever defense-sector privatization in Latin America – calls for LAASA to maintain, repair, and overhaul Argentine Air Force equipment over five years. When PERFA 2000 effectively died, so did the FAA’s own orders for new Pampa aircraft.²¹⁵ With no new domestic or foreign orders for the Pampa, the Córdoba facility had been sitting idle at the time of the Lockheed takeover. At the time the deal was closed, Lockheed’s manager of the facility told the *Los Angeles Times*, “If they didn’t find a father for this baby, they were going to shut it down”²¹⁶

The sale represented a radical departure from past Argentine defense policies which emphasized domestic production of arms as a matter of national security. Unlike Chile, Argentina built up an extensive, and heavily subsidized state-owned aviation industry. It aimed high, engaged in ambitious projects, but its products never won the foreign contracts that might have allowed it to flourish. Argentina’s own experience with modern war demonstrated the benefits of access to advanced technology – such as the Navy’s Super Etendards – over budget-breaking home-grown products of limited capability such as the Pucará. Now Argentina has placed the future of its local aviation industry in entirely private and foreign hands.

While the work in California started promptly, problems with the LAASA contract delayed late into 1996 the start of upgrade work at the Córdoba facility. FAA difficulties in securing part of the financing for the upgrade work caused delays, as did a dispute over pension liabilities for current and former employees of AMC – the facility once employed 10,000 people – which could potentially saddle Lockheed Martin with significant losses.

²¹⁵ “Tooling for the IA-63 Pampa remains intact at Lockheed Aircraft Argentina, and there is a paper requirement for more aircraft for the Argentine Navy and Air Force, but there are no funds to restart production.” Bill Sweetman, “Choosing a Primary Air Trainer,” *Jane’s International Defense Review*, March 1997, 71-75, at 73-74.

²¹⁶ Long, William R. “Lockheed Martin to Manage Argentine Military Aircraft Center,” *Los Angeles Times* (Washington edition), June 22, 1995, B-6; “Argentina,” *Western Hemisphere Diversification and Defense Market Assessment: A Comprehensive Guide for Entry into Overseas Markets*, [Washington:] US Department of Commerce, Bureau of Export Administration, Office of Strategic Industries and Economic Security, 1996, 27.

Restructuring

Montenegro has said that over the next ten years the FAA will restructure by reducing the number of major units from the current ten Air Brigades to no more than four or five.²¹⁷

Cóndor II

On May 28, 1991, the Argentine government announced that it would voluntarily kill the FAA's Cóndor II ballistic missile program. The FAA had based the missile on an earlier short-range, single-stage, solid-fuel sounding rocket which it manufactured in the late 1970s.²¹⁸ Argentina needed to end the program if it wanted to join the Missile Technology Control Regime and gain the confidence of the United States government as a nonproliferation and viable political partner.

Anything having to do with the FAA has to take into account the political fallout from the Cóndor II. Ending the program embittered many FAA officers, who did not like the role the US played in Cóndor II's demise. Air Force modernization – modest as it is – is the largest such program in any of Argentina's three services. It can be viewed as a consolation for termination of the ballistic missile program.²¹⁹

Argentine Naval Aviation

Any discussion of Argentine air power must consider Argentine Naval Aviation. Argentina's aircraft carrier, the *25 de Mayo*, has not sailed in years and cannot do so under its own power. Its engines have been removed to await a chronically underfunded overhaul. In December 1996, as part of a series of broader cuts, Admiral Carlos Marron, Chief-of-Staff of the Argentine Navy, announced the termination of the *25 de Mayo* refit, the first

²¹⁷ Daniel Casas, "Reestructuración y valor," *Página/12*, Nov. 15, 1996, *Ser en el 2000 Database*, Nov. 20, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cc3c.htm>>, (Feb. 10, 1997). For more complete rundown of the FAA, see Appendix I.

²¹⁸ "Missile Proliferation - Argentina," *FAS Project on Intelligence Reform*, Sept. 12, 1996, <<http://www.fas.org/irp/threat/missile/argentin.htm>>, (Dec. 9, 1996).

²¹⁹ Michael Barletta <barletta@leland.Stanford.EDU>, "Re: Argentine - Chilean Air Force Modernizations" Nov. 13, 1996, (Nov. 14, 1996).

time the Navy has acknowledged publicly that it will not repair the carrier.²²⁰ Even if the Argentine government had refurbished the carrier, the Navy lacked the ability to defend it. During most of the Falkland/Malvinas war the *25 de Mayo* remained in harbor and Argentine naval air operated from the land.

The cancellation of the carrier refit has made it harder for the Navy to justify the existence of tactical air within naval aviation.²²¹ This is particularly true given the desperate state of naval air. According to a report presented to the Argentine Congress in late 1995 by Admiral Enrique Molina Pico, then serving as Navy Chief-of-Staff, Argentine naval aviation had ceased to be an effective fighting force. Out of 68 aircraft in its inventory, the navy considered 15 fully operational and eight “degraded.” It was overhauling eight more.

In the early 1980s, the Navy bought 14 Super Etendard naval attack aircraft from France. The French delivered five before Argentina invaded the Falkland/Malvinas Islands and the Argentines used them and their Exocet AM-39 missiles to sink two British ships, the *Sheffield* and the *Atlantic Conveyor*. Argentina lost none of these aircraft during the war. France shipped nine more after the European Community ended an arms embargo against Argentina once the war had ended.²²²

Of the 14 Super Etendard aircraft, only two were operational at the time Admiral Molina Pico briefed the Argentine Congress. The Navy had lost two in accidents and had grounded the remainder but hoped to eventually overhaul and upgraded them. For five years running, budget and maintenance problems had kept Navy pilots from reaching the number of flight hours the Navy considered the minimum required to sustain readiness.²²³ On May 29, 1996, an Argentine Navy Super Etendard crashed at the

²²⁰ “Argentine Navy to Suffer Searing Cuts,” *Jane’s Intelligence Review*, Vol. 9, No. 2, Feb. 1997, 50.

²²¹ James Zackrison <ZACKRISONJ@NDU.EDU>, Feb. 5, 1997, “Argentine Naval Aviation -Reply,” (Feb. 5, 1997).

²²² “Argentina Restocks Arsenal With Tip-Top Fighters, Missiles,” *The Christian Science Monitor*, Jan. 12, 1983, 4.

²²³ Luis Garasino, “Duro informe de la Armada: Graves problemas operativos,” *Clarín*, March 11, 1996, 10.

Punta del Indio Naval Air Base, killing its pilot.²²⁴ A subsequent investigation attributed the crash to pilot error.

Yet the Air Force, facing the same budget pressures as the Navy, is not in a position to absorb naval aviation. It cannot afford to increase its inventory – even if for free – let alone expand its missions.²²⁵

Building Confidence

Changed international conditions and South America's quiet revolution have allowed the Southern Cone to become a proving-ground for confidence-building measures in the Americas. The decline in regional tensions and the growth of economic and political cooperation have given these states an opportunity to use peaceful means to resolve their differences.

The Road to Reconciliation

Over the last twenty years, successful cooperation has turned on the resolution of outstanding territorial disputes and transparency in the organization and the deployment of military forces.²²⁶ The easing of Brazilian-Argentine tensions began in the late 1970s with naval exchanges and the resolution of the Itaipú-Corpus dispute. With that issue resolved, Brazil and Argentina could gradually establish a new security relationship.

The road to reconciliation between Chile and Argentina began with the resolution of their differences over the Beagle Channel. Political conditions are now right for Chile and Argentina to build a new security relationship, as Brazil and Argentina have already done. Transparency in the Chilean-Argentine military relationship is all the more

²²⁴ "Argentina: Navy Training Plane Crashes; Pilot Killed," *Noticias Argentinas*, May 29, 1996, *Foreign Broadcast Information Service*, FBIS-LAT-96-105, May 10, 1996, 31.

²²⁵ James Zackrison <ZACKRISONJ@NDU.EDU>, Feb. 5, 1997, "Argentine Naval Aviation -Reply," (Feb. 5, 1997).

²²⁶ Pedro Luis de la Fuente, "Confidence Building Measures in the Southern Cone: A Model for Regional Stability," *Naval War College Review*, Winter 1997, Vol., L, No. 1, 37-65.

important now that Chile is likely to become one of the first countries in South America to acquire modern and highly capable fighter aircraft.

In both Chile and Argentina defense spending has been declining. The Argentine decline has been dramatic and its current defense structure and plans for the future both reflect the cuts. FAA upgrades are modest by any measure. The FAA at the end of the century will clearly threaten its neighbors less than it did twenty or twenty-five years ago.

The decline in Chilean defense spending has been far more gradual, but all three Chilean services are clearly spending less than they did in the late 1980s. Still, with copper funds for acquisitions, and without the crushing pension burden carried by the Argentine services, the Chilean services have a financial freedom their Argentine counterparts do not enjoy. But the wealth of the Chilean armed forces is only relative. The FACH's modernization efforts are impressive, but not inherently unreasonable. Its forces are more capable than ten years ago, but ten years ago it was still recovering from the effects of the sanctions years. It has not substantially expanded its air fleet, but rather upgraded the capabilities of key commands.

Yet however reasonable the FACH's modernization program, when taken together with Argentina's defense policies it does not contribute to a diminished sense of military threat. Chile need not forswear force modernization to work towards this goal, but both Chile and Argentina might consider matching new military acquisitions with complimentary CBMs.

Transparency

Governments build confidence on a foundation of transparency in military affairs. The sense of security such transparency promotes allows states to adapt their military postures to the true threats they face and – where threats are low – encourages broad and stable economic and political cooperation. Chile and Argentina started to build such a

foundation over a decade ago. In the years since, they have joined in a number of successful CBMs. Yet they still have work to do, for a lack of confidence persists.²²⁷

Chile and Argentina established a number of conflict-avoidance mechanisms in the Beagle Channel area after signing the 1984 Treaty of Peace and Friendship. Discussed in greater detail below, they are good examples of how fairly simple bilateral agreements can reduce the possibility of accidental conflicts.²²⁸ Other CBMs now in place grew out of existing agreements with Brazil and other countries, some rely on Inter-American arrangements, others are strictly bilateral in nature.

Today's challenge is not the challenge of the Beagle Channel years – averting armed conflict across the Andes – but rather assuring that a lack of trust across the border or an issue such as Hielos Continentales/Campos de Hielo Sur does not throw up needless barriers to integration. The FACH's early 1996 construction of the temporary "Hielo Azul" Air Base near the disputed Hielos Continentales/Campos de Hielo Sur area is a good example of the kind of problem such unresolved issues pose for policy makers.

The base ruffled more than a few feathers in Argentina, then-Defense Minister Oscar Camilión simply called it "inappropriate,"²²⁹ although it was located in indisputably Chilean territory. FACH Commander Fernando Rojas Vender replied to criticisms by saying that "the FACH has no need to inform the Argentine government because ... (the mission) will be fully carried out within Chilean territory ... the FACH moves freely in Chilean territory."²³⁰ Recognizing both Chile's unquestioned right to establish the base and the accuracy of Rojas Vender's observation, the base undoubtedly and perhaps

²²⁷ For an example of Argentine concerns, see comments by Brig. Gen. Alberto Luis Cattaneo (ret.) in "Argentina: Military Experts on Future of Armed Forces," *La Nación*, Oct. 14, 1996, *Foreign Broadcast Information Service*, Oct. 23, 1996, FBIS-LAT-96-205, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

²²⁸ For this and much of the subsequent discussion of confidence-building measures I owe a debt to Rut Diamint, "Medidas de confianza mutua: realizaciones y propuestas para la Argentina", *Ser en el 2000*, No. 2, Buenos Aires, Sept. 1992, pp. 70-76, *Ser en el 2000 Database*, Oct. 14, 1996, <<http://ser2000.overnet.com>>, (Dec. 9, 1996).

²²⁹ "Chilean Base in Continental Glaciers 'Inappropriate'," *Noticias Argentinas*, Jan. 8, 1996, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-008, Jan. 8, 1996, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

²³⁰ "Air Force Commander on Argentine Criticism of Maneuvers," *El Mercurio*, Dec. 30, 1995, trans., *Foreign Broadcast Information Service*, FBIS-LAT-96-003, Dec. 30, 1995, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

needlessly complicated Chilean-Argentine relations. Settlement of the border dispute and establishment of close communications between the FACH and the FAA can help diffuse these sorts of problems.

This is why Chilean and Argentine defense policies, spending, and force modernization are important, despite the improbability of armed conflict. They in themselves can become barriers to closer cooperation. Security is not produced in a vacuum and armed forces are not ends in themselves but tools of national policy. If defense policies are poorly harmonized with broader national goals they can help frustrate those goals. Chile and Argentina both must assure that the traditional means of territorial defense do not needlessly compromise the achievement of broader objectives or the securing of a more ample kind of national and regional security. A good way to do so is to draw one another into closer working relationships to dispel misconceptions and avoid misunderstandings. Here are some of the measures already adopted by Chile and Argentina and some possible next steps.

Meetings Between Cabinet Members and Armed Forces Commanders

In 1990, presidents Aylwin and Menem established a regular schedule for meetings between Chilean and Argentine Foreign and Defense Ministers and the Chiefs of the Armed Forces. They have become an effective forum for discussing national strategies and changes in force structure, including future acquisitions. In November 1995, Chile and Argentina expanded on the original initiative to establish a Permanent Security Committee composed of senior Foreign and Defense Ministry officials from both countries and representatives of their respective army staffs. The Committee is charged with "establishing a working agenda aimed at deepening cooperation between Argentina and Chile on security matters."²³¹

²³¹ "Memorandum of Understanding Between the Republic of Argentina and the Republic of Chile for Strengthening Cooperation on Security matters of Mutual Interest," Nov. 8, 1995, *Confidence Building in the Southern Cone, The Stimson Center*, <<http://www.stimson.org:80/pub/stimson/cbm/la/argchil2.htm>>, (Feb. 16, 1997).

These meetings now take place at least twice a year, with lower-level working groups meeting more often, with the specific mandates of strengthening defense-related channels of communication, establishing timely notification of military maneuvers and exchanges of observers at those maneuvers, and promotion of academic research strengthening security cooperation across the Andes.

When President Frei visited Argentina in April 1996, the Chilean and Argentine cabinets met in joint session for the first time.²³² Such meetings have become almost commonplace between the Brazilian and Argentine cabinets.

These cabinet-level and sub-cabinet-level meetings come in addition to consultations of a broader regional character – in which Chile participates – that Brazil and Argentina began holding between their military commanders after presidents Sarney and Alfonsín signed the November 1985 Iguazú Declaration. In the late 1980s, first Uruguay and then Paraguay joined the original participants, first as observers and then as members of the group. Chile began attending as an observer in the early 1990s and is now a full participant.

Contacts Between the Chilean and Argentine Air Forces in Tierra del Fuego

In the late 1980s, the FACH and the FAA established a permanent communications system between their Air Force commanders in Punta Arenas, Chile, and Río Gallegos, Argentina.

The two air forces exchange information on their own flight and related activities in Tierra del Fuego and coordinate air traffic control in the areas around Puerto Williams, Chile, and Ushuaia, Argentina. They have set up regular procedures for requesting approval to fly over the other's territory in this area where overflights are at times unavoidable.

²³² "Chile: Frei Returns from Argentina, Views "Historic" Visit," *El Mercurio*, April 28, 1996, *Foreign Broadcast Information Service*, April 28, 1996, FBIS-LAT-96-086, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

The FACH and the FAA could extend elements of this regime, instituted because of the tense history of the Beagle Channel region, to all their Air Commands as a step towards assuring both governments that – even if tense situations develop – strategic surprise is not in the cards.²³³

Chilean and Argentine Naval Cooperation

Annual meetings take place between local naval commanders in Ushuaia and Puerto Williams. The commanders exchange information regarding naval units in the area and are empowered to resolve minor disagreements. Annual meetings were found insufficient to build any kind of effective relationship, so in 1994 the two navies decided to increase their frequency. They also decided to promote exchanges of junior officers and increase the number of reciprocal port calls.²³⁴

A 1967 agreement between Brazil, Paraguay, Uruguay, and Argentina established the South Atlantic Maritime Area (AMAS) in which the four states agreed to cooperate in controlling South Atlantic maritime traffic. Officials of the Brazilian and Argentine navies alternate in serving as AMAS Coordinator (CAMAS). On a daily basis, AMAS members exchange information on South Atlantic maritime activity. They also conduct annual naval exercises.²³⁵ Argentina has signed similar bilateral agreements with Chile.

²³³ Marcela Rosana Donadio and Luis Tibiletti, "El concepto de balance estratégico y la seguridad regional en el Cono Sur," *Balance estratégico y medidas de confianza mutua*, Santiago: FLACSO, 1995, 157-190, *Ser en el 2000 Database*, Oct. 19, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cb2c.htm>>, (Jan. 31, 1997).

²³⁴ Pedro Luis de la Fuente, "Confidence Building Measures in the Southern Cone: A Model for Regional Stability," *Naval War College Review*, Winter 1997, Vol., L, No. 1, 37-65, at 57-58.

²³⁵ Argentina and Brazil, for example, conduct the annual *Fraterno* exercises. Argentina, Brazil, and Uruguay participate in the biannual *ATLASUR* exercises with the Republic of South Africa, which began in 1993 as a bilateral Argentine-South African initiative. See, "Argentina: Fraternal XVI Joint Maneuvers with Brazil Begin," TELAM, Nov. 18, 1996, *Foreign Broadcast Information Service*, Nov. 25, 1996, FBIS-LAT-96-227, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>; (May 1, 1997), María Elena Polack, "La Armada Participará en Ejercicios Conjuntos," *La Nación On Line*, Feb. 21, 1997, <<http://www.lanacion.com.ar/97/02/21/p09.htm>>, (May 1, 1997).

Security Forces

The Chilean Carabineros and the Argentine Gendarmería – the border police for their respective governments – have adopted their own CBMs. They give each other advance notice of movements along the border and inform one another about patrols.

New Measures

The two governments have already established more frequent meetings of their senior military commands. They might now consider a structured program of exchanges between local commanders, particularly in border areas, similar to those established in Tierra del Fuego. Regular data exchanges on military equipment and force deployments already exist in various forms, but it would be useful to regularize them and – to the extent possible – make them public.

As a general principle, more public information regarding defense strategies and more detailed information about annual defense expenditures will go a long way towards building confidence. Making such information public is important in the Southern Cone. Chile and Argentina are democratic states. It is not only important that public officials understand the benign intentions of their neighbors, but that such information begins to seep into the public consciousness of both societies. Building confidence at the public level is needed to counteract generations of popular suspicions, part of the region's "public, social, and cultural traditions."²³⁶

Argentina began making defense spending more accessible to public scrutiny with the publication of its 1994 budget. The revised reporting system eliminated many special accounts and correctly regrouped expenditures under Defense and Security previously credited to other accounts.²³⁷ Chilean Defense Minister Pérez Yoma has made a

²³⁶ Marcela Rosana Donadio and Luis Tibiletti, "El concepto de balance estratégico y la seguridad regional en el Cono Sur," *Balance estratégico y medidas de confianza mutua*, Santiago: FLACSO, 1995, 157-190, *Ser en el 2000 Database*, Oct. 19, 1996, <<http://ser2000.overnet.com.ar/Archivo/d000cb2c.htm>>, (Jan. 31, 1997).

²³⁷ Rut Diamint, "Medidas de confianza mutua: realizaciones y propuestas para la Argentina", *Ser en el 2000*, No. 2, Buenos Aires, Sept. 1992, pp. 70-76, *Ser en el 2000 Database*, Oct. 14, 1996, <<http://ser2000.overnet.com>>, (Dec. 9, 1996).

particular point of engaging civilians in public discussions of defense policy.²³⁸ Such transparent steps – undertaken to achieve domestic political goals – are also important CBMs when viewed in the international context.

Perhaps the two governments could work towards a standardized form of reporting defense expenditures. Argentine Defense Minister Jorge Domínguez endorsed proposals for greater transparency in defense spending during the Second Conference of Defense Ministers of the Americas held in October 1996 in Bariloche, Argentina. During the Conference, Chile also publicly called for “full disclosure” of defense-related information.²³⁹ Such a standardized and open reporting system would certainly free the Chilean Defense Ministry from its annual debates with organizations such as the International Institute for Strategic Studies and the UN Development program about how much it actually spends on defense.²⁴⁰

Exchange visits seem to be reasonably well established between the Chilean and Argentine navies. The FACH and FAA might try to promote similar junior officer exchanges of reciprocal pilot and crew exchanges for familiarization and joint training. The FACH and FAA squadrons that fly Mirage 5 and 50 aircraft might be good places to start such exchanges. As a good will gesture the two governments might consider declaring thin-out zones along the border. Such zones could be placed under the authority of strictly civilian authorities except in emergency situations and natural disasters.²⁴¹

²³⁸ “Chile: Need for Civil-Military Cooperation Noted,” *La Nación* (Santiago), March 21, 1996, *Foreign Broadcast Information Service*, March 21, 1996, FBIS-LAT-96-069, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

²³⁹ “Chile Explains its Position on Confidence Building,” *El Mercurio*, Oct. 10, 1996, *Foreign Broadcast Information Service*, Oct. 10, 1996, FBIS-LAT-96-200, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

²⁴⁰ “Argentina: Domínguez on Defense Conference Issues,” *Clarín*, Oct. 7, 1996, *Foreign Broadcast Information Service*, Oct. 10, 1996, FBIS-LAT-96-197, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997); Katherine Bauerle Ewert, “Las Cifras de la Discordia,” *El Mercurio* (May 18, 1996), <<http://ser2000.overnet.com.ar>>, (Jan. 10, 1997).

²⁴¹ Rut Diamint, “Medidas de confianza mutua: realizaciones y propuestas para la Argentina,” *Ser en el 2000*, No. 2, Buenos Aires, Sept. 1992, pp. 70-76, *Ser en el 2000 Database*, Oct. 14, 1996, <<http://ser2000.overnet.com>>, (Dec. 9, 1996).

Combined exercises by Chilean and Argentine armies, navies and air forces could not only increase interaction and improve relations between the services, but also publicly demonstrate that the era of conflict is over. If the FACH and the FAA could begin with exercises in preparation for such things as coordinated air lifts to respond to natural disasters or similar non-controversial missions it could – on both sides of the border – go a long way to reinforcing in the popular mind the peaceful intentions of the other nation and diffusing concerns about the other nation's capabilities. Confidence rather than air power is the fundamental issue.

Finally, outside parties such as Brazil or the United States might consider engaging both Chile and Argentina in combined air exercises or training programs as a way to emphasize regional security, promote inter-operability, and – of course – to build confidence.

Conclusion

Argentine Internationalism vs. Chilean Focus on Traditional Roles

Although Chile looks outward in economic terms, politically it has held fairly close to a more traditional "isolationist" foreign policy and an inward looking defense policy.²⁴² Its armed forces have reacted coolly to CBMs, concerned that they might be a back door to arms control. Argentina under Carlos Menem has vigorously engaged itself in the world. It has led regional confidence-building and arms control efforts. Since the early 1990s it has also been an active participant in international peacekeeping.²⁴³ Although Chile has also joined in international peacekeeping efforts it has adopted a much more limited approach than Argentina, setting out strict and narrow guidelines for the commitment of troops.²⁴⁴

²⁴² Margaret Daly Hayes, *By Example: The Impact of Recent Argentine Naval Activities on Southern Cone Naval Strategies*, CRM 94-111.10/Feb. 1995, Alexandria, VA: Center for Naval Analysis, 1995, 31.

²⁴³ "Argentine Participation in Peace Keeping Operations," <<http://www.ar:80/cwash/homepage/pko.htm>>, Feb. 16, 1997).

²⁴⁴ "Chile: Frei Approves Regulation for Peacekeeping Missions," *El Mercurio*, Oct. 31, 1996, *Foreign Broadcast Information Service*, Oct. 31, 1996, FBIS-LAT-96-213, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1996).

Ties That Bind

These policy differences are minor when compared to their similar economic policies and their common commitment to regional integration. The knitting together of their economies demonstrates that commitment and is at the heart of their new political relationship. By 1995, Chilean direct investment in Argentina amounted to roughly US \$5.6 billion. Today it may be as high as US \$7 billion. That is 75 percent of all Chilean foreign direct investment abroad.²⁴⁵ Many of those investments are in electrical power generation and Argentina's oil and gas industry. Indeed, Argentine natural gas will soon directly service the Santiago metropolitan area via a pipeline built by a Chilean-Argentine joint venture.²⁴⁶ In recent years Chile and Argentina have also made notable advances in establishing a regime for mining resources that straddle their border.²⁴⁷ Chileans have made major investments in Argentine firms selling consumer goods, banking services, home appliances, dairy products, textiles, chemicals, pharmaceuticals; in short, throughout the economy.²⁴⁸ Argentina has a healthy trade surplus with Chile and Argentine investment in Chile is also growing. Economic growth and integration have drawn Chile and Argentina together as never before.

Air Power Advantage Chile

With so many positive trends in the bilateral relationship, both governments need to work overtime to ensure that military modernization – a potentially centrifugal force – does not draw their countries apart. We have seen how the current Chilean and Argentine air force modernization programs will tilt the air power balance in Chile's

Still, the Chilean armed forces, including the FACH, have participated in a number of UN operations, including UNSCOM, the UN Special Commission for Iraq's Disarmament. See, "Chile: UN Praises Performance of Chilean Mission in Iraq," *El Mercurio*, March 25, 1997, *Foreign Broadcast Information Service*, FBIS-LAT-97-084, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (April 28, 1997).

²⁴⁵ Roger Turner, Chilean Desk Officer, US Department of Commerce, telephone conversation, Feb. 18, 1997; Heraldo Muñoz Valenzuela, "Racing to Achieve Development," *Folha de Sao Paulo*, Feb. 6, 1997, *Foreign Broadcast Information Service*, Feb. 10, 1997, FBIS-LAT-97-026, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Feb. 18, 1997).

²⁴⁶ "Remapping South America: A Survey of Mercosur," *The Economist*, Oct. 12, 1996, 19.

²⁴⁷ "Argentina: Mining Declaration Signed with Chile," *TELAM*, May 23, 1996, *Foreign Broadcast Information Service*, May 24, 1996, FBIS-LAT-96-102, 22.

²⁴⁸ "Chile," *Invertir*, <<http://www.invertir.com:80/chi.html>>, (Feb. 18, 1997).

favor. In itself this poses no threat to Argentina. Air power is only part of the military equation, and the military balance is only aspect of the bilateral relationship. Some observers, however, will suspect that the FACH's increasing capabilities signal an impending arms race. The Chilean and Argentine governments, partners in regional integration, must keep such suspicions in check and manage these changing military circumstances so that they do not undermine broader national policies. Air power's very versatility makes it particularly important that political and military leaders attune themselves to its political impact. They can make modernization an issue of minimal concern to their neighbors by making their programs transparent to outside observers and by consciously adopting measures that will build confidence in their own peaceful intentions. As they modernize they must balance the value of new military capabilities not only against their impact on the national budget but against the political costs of acquiring them.

Threats, Security, and Trust

Chilean Navy Undersecretary Pablo Cabrera has said that economic integration has reduced the chance of conflict but that Southern Cone governments cannot consolidate this gain if the armed forces do not acknowledge that strategic threats have disappeared.²⁴⁹ Cabrera is right, but the responsibility for redefining the security environment also belongs to civilian authorities.

Civilian leaders must take the lead in building trust and a new security architecture for the Southern Cone. Security is about more than military readiness. As often as not, it is about trust, communication, and peaceful ways of solving differences as they arise. In a democratic society, proper use of these tools requires strong leadership from civilian

²⁴⁹ "Chile Explains its Position on Confidence Building," *El Mercurio*, Oct. 10, 1996, *Foreign Broadcast Information Service*, Oct. 10, 1996, FBIS-LAT-96-200, <<http://fbis.fedworld.gov/cgi-bin/retrieve>>, (Jan. 24, 1997).

authorities – giving clear and nonpolitical missions to the armed forces²⁵⁰ – and a disciplined focus on core responsibilities by the armed forces.

To Govern Is To Set Priorities

In Chile, persistent military enclaves undermine the civilian leadership's ability to provide strong leadership. They ensure that setting priorities in foreign and defense policy is not exclusively a function of elected authorities. Chile's Congress and the Frei administration cannot freely decide, for example, how much money to allocate to defense acquisitions. The reserve copper law "enclave" is at least partly beyond democratic control. Consequently, the military services do not compete for public resources on an even playing field with other government institutions. Chilean democracy must progressively reduce such enclaves if Chile is to win the lasting trust and confidence of its neighbors. Only then will Chile's partners know for certain that its government speaks with one voice on security matters. The fundamental political question Chileans must answer, for themselves and for their neighbors, is who sets Chile's national defense priorities, the armed forces or elected officials.

Who Sets the Agenda?

None of this implies the imposition of external limits. Attempts to place a technological ceiling on the capabilities of conventional military equipment sold in the region will not succeed. The political will to establish a suppliers group restricting access to fourth-generation fighters and similar military equipment is nowhere in evidence in the Europe, North America, or elsewhere. In the current environment, neither the United States, nor any other government, can effectively set a ceiling on aviation technology flowing to South America and its Southern Cone.

Any limits will come on the demand side. Instead of trying to limit the supply of military aircraft – a policy doomed to failure – governments interested in limiting the destabilizing impact of new military technologies should put their energies into building

²⁵⁰ Wendy Hunter, *State and Soldier in Latin America: Redefining the Military's Role in Argentina, Brazil, and Chile*, Washington: United States Institute of Peace, 1996, 35.

stability in the region. In the military sphere, they can do so by promoting multilateral service-to-service contacts and concrete political initiatives – such as a resolution of the last border dispute between Chile and Argentina – that will lessen the importance of military power in assuring regional security. Accelerated economic integration will also mitigate the importance of military factors in shaping the region's future. In short, building a community of shared interests will reduce the likelihood of conflict.

To capture the spirit of South America's quiet revolution, both the Chilean and Argentine governments should consider unilateral CBMs – goodwill gestures of their own choosing – as modernizations proceed in their air forces or in their other services. Such an initiative would be a constructive next step in attenuating nationalist suspicions across the frontier. When Brazilian President Cardoso publicly ruled out the possibility of conflict on the border with Argentina he did more to build trust across that border than had any stack of bilateral agreements.

Friends of Chile and Argentina, including the United States and Brazil, should consider acting as facilitators in this process of building trust. To do so effectively will require a steady commitment to South America's collective security. Such a commitment is harder to sustain than a fairly simple decision to restrain arms sales to the region, but in the long run it will return far greater dividends.

Appendix I – The Structure of the Argentine Air Force

The 1st Air Brigade, based outside of the Federal Capital, comprises the 1st Transport Group with five squadrons equipped with C-130s, Fokker F-28s, IA-50s, F-27s, and 707s. It includes two KC-130H aerial refueling tankers. The 2nd Air Brigade's 2nd Bombardment Group, based in Paraná, has four aging Canberra bombers. The 3rd Air Brigade's 3rd Attack Group, based at Reconquista, Santa Fé Province, has two squadrons of Argentine-built IA 58-A Pucará aircraft. Neither is fully operational. The 4th Air Brigade, based in El Plumerillo, Mendoza, consists of the 4th Operational Training Group, where the FAA conducts advanced training. The Air Brigade includes squadrons of MS 760 Paris and IA-63 Pampas, SA-315 helicopters, and the "55" Fighter Squadron of approximately 17 Mirage 3 fighters. The Paris are now nearly 40 years old and the Pampa – no longer in production – is suffering from maintenance and spares problems.²⁵¹ The 5th Air Brigade in Villa Reynolds, Province of San Luis, which flies the FAA's original A-4s, will receive the bulk of the A-4M "Argentino" aircraft now being upgraded by Lockheed.

Twenty-two Dagger Nesher fighters in two squadrons and 19 Mirage 3 fighters in two squadrons make up the 6th Air Brigade's 6th Fighter Group, based in Tandil, Buenos Aires Province. Along with the A-4 Skyhawks, they are the backbone of Argentina's tactical air defenses. In 1994, IAI fitted the Mirage 3s with in-flight refueling probes and Head-Up Displays. The 7th Air Brigade, based in Mórón in Buenos Aires Province, consists of the 7th Air Group of three helicopter squadrons and a medical evacuation squadron. The 8th Air Group no longer exists. The 9th, based in Comodoro Rivadavia, is made up of two transport squadrons, and the 10th Air Brigades 10th Fighter Group flies a squadron of no more than nine or ten Mirage 5 aircraft out of Rio Gallegos.²⁵²

²⁵¹ "Military Affairs: Argentina," *Air International*, July 1996, 2.

²⁵² "Argentina, Air Force," *Military Technology*, Jan. 1995, 32.

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